TRIAD

Magnetics Catalog

Audio

Food Processing

Industrial Controls

Test and Measurements

Alternative Energy

Power Conversion

Medical

HVAC

Information Technology

LED Lighting

Security

TRIAD MAGNETICS. YOUR INNOVATIVE PARTNER.

If you could look inside the most advanced computers, telecommunication systems, automation controls, audio devices and other equipment -- you would see many of them have something in common. They depend on innovative technology solutions from Triad Magnetics for power conversion, filtering, isolation and more.

For over 60 years, Triad has been an electronics innovator and a leader. Lewis W. Howard founded the company during the 1940s in Venice, California. He was a graduate of UC Berkley, a cofounder of the Wescon Trade Show and was recognized as a life member of IEEE for his contributions to the industry.

In the 1950s, Triad first helped Leo Fender and surf guitarist Dick Dale turn up the volume on amplifiers, which led to the birth of Rock & Roll. Triad was next the dominant supplier to the TV industry in the 1960s. Transformers from Triad also supported the Apollo mission to the Moon, and then the first microwave ovens in the 1970s. The Triad brand played a leading role in the rise of industrial automation and controls, electronic ballasts for lighting systems and innovative medical devices in the 1980-90s.

Today, you'll find Triad has emerged again as an innovative leader after a number of years as a successful division of the Litton, MagneTek and Parallax companies. Triad has returned to its roots in Southern California with a 38,000 square foot modern engineering and service center, which is conveniently located in Perris -- It is a subsidiary of the Axis Corporation, an electronics industry leader listed on the Taiwan stock market. The company's Taiwanese headquarters facility includes a design center with sophisticated R&D capabilities. Manufacturing facilities are located in Mainland China.

Our factory in Qing Xi, China, is only 50 minutes from the border and customs facilities.

TRIAD MAGNETICS TIMELINE

2000s
Triad opens new Southern California facilities

1990s
Triad supports advances in computer-based automation & control

1980s
Triad develops electronic ballasts for smart lighting systems

1970s
Triad brings home the bacon with microwave ovens

1960s
Triad joins the race to the moon

1950s
Triad turns it up with rock & roll amplifiers

1940s
Triad is founded by Lewis W. Howard

TRIAD MAGNETICS. COMMITTED TO EXCELLENCE.

:: Engineering

Triad offers a broad off-the-shelf product line of popular transformers, autotransformers and inductors. If you have a power or filtering problem, our expert design engineers have probably already solved it for someone else with one of our thousands of standard part numbers. The company's advanced CAD and other computer systems also allow it to provide custom solutions, with rapid prototyping and testing too. Certification is available to UL and many other standards upon request.

High-speed automated welding equipment for transformer cores provides economical production.

:: Manufacturing

Triad's manufacturing facilities include state-of-the-art coil winding equipment, as well as ferrite gapping machines, lamination welding equipment and automated testing. The company's advanced cellular manufacturing system reduces material handling and process cycle times. Our Quality Management System relies on the latest statistical process control and continuous improvement techniques which ensure the highest product reliability and long-life.

Precision gapping machines ensure high performance and quality in all our magnetic components.

:: Service & Delivery

Our customer service and technical support staff is ready to assist you promptly because we know your time is important. With one of the industry's broadest networks of manufacturers' representatives and distributors, Triad is also your local supplier just about everywhere in the world. That means there is plenty of standard product on the shelves, and it's available for overnight shipping, which gives you the flexibility to make fast decisions and rapid changes.

:: Value

When you look at Triad's long record of innovation combined with its present capabilities, high performance products, commitment to excellence, quality, service and price, it all adds up to exceptional value. Triad is the magnetics technology partner that you can trust to help your company achieve a competitive advantage in today's fast-moving electronics industry.

Advanced automated coil winding machines offer superior reliability.

TRIAD

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QUALITY POLICY

Triad's Quality Policy is the total satisfaction of our Customer's expectations. This is achieved by our covenant to the following:

- *An unwavering compliance to the requirements of applicable product safety and performance standards (UL, TUV, etc), ISO 9001:2008, drawing specifications and applicable customer requirements.*
- *The on-going pursuit of continually improving the effectiveness of Triad's Quality Management System.*
- *The consistent assessment and fulfillment of our Customer's changing needs.*

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FS16-2250	8.0	4.5	115/230	46
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FS16-400	8.0	0.8	115/230	45
FS16-400-C2	8.0	0.8	115/230	47
FS16-800	8.0	1.6	115/230	45
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VPP16-150	8.0	0.3	115/230	35
VPP16-310	8.0	0.62	115/230	35
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VPP16-1900	8.0	3.8	115/230	35
VPP16-3500	8.0	7.0	115/230	35
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VPS16-1600	8.0	3.2	115/230	37
VPS16-2700	8.0	5.4	115/230	37
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F-166XP	9.0CT	0.500	115	51
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F10-250	10.0CT	0.25	115	45
F10-250-C2	10.0CT	0.25	115	47
F10-3600	10.0CT	3.6	115	46
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F10-600	10.0CT	0.6	115	45
F10-600-C2	10.0CT	0.6	115	47
F-180X	10.0	1.0	115	55
F20-055	10.0	0.11	115	45
F20-055-C2	10.0	0.11	115	47
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F20-1000-C2	10.0	2.0	115	47
F20-120	10.0	0.24	115	45
F20-120-C2	10.0	0.24	115	47
F20-1800	10.0	3.6	115	46
F20-1800-C2	10.0	3.6	115	48
F20-300	10.0	0.6	115	45
F20-300-C2	10.0	0.6	115	47
F20-600	10.0	1.2	115	45
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F-373P	10.0	2.4	115/230	53
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FS10-250-C2	10.0CT	0.25	115/230	47
FS10-3600	10.0CT	3.6	115/230	46
FS10-3600-C2	10.0CT	3.6	115/230	48
FS10-600	10.0CT	0.6	115/230	45
FS10-600-C2	10.0CT	0.6	115/230	47
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VPL10-5000	10.0CT	5.0	115/230	39
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VPL20-250	10.0	0.500	115/230	39
VPL20-2500	10.0	5.0	115/230	39
VPL20-500	10.0	1.0	115/230	39
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VPP10-2000	10.0 CT	2.0	115/230	35
VPP10-250	10.0 CT	0.25	115/230	35
VPP10-3000	10.0 CT	3.0	115/230	35
VPP10-500	10.0 CT	0.5	115/230	35
VPP10-5600	10.0 CT	5.6	115/230	35
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VPP20-1500	10.0	3.0	115/230	35
VPP20-2800	10.0	5.6	115/230	35
VPP20-250	10.0	0.5	115/230	35
VPP20-500	10.0	1.0	115/230	35
VPS10-13000	10.0CT	13.0	115/230	37
VPS10-17500	10.0CT	17.5	115/230	37
VPS10-2500	10.0CT	2.5	115/230	37
VPS10-4300	10.0CT	4.3	115/230	37
VPS10-8000	10.0CT	8.0	115/230	37
VPS20-1250	10.0	2.5	115/230	37
VPS20-2200	10.0	4.4	115/230	37
VPS20-4000	10.0	8.0	115/230	37
VPS20-6500	10.0	13.0	115/230	37
VPS20-8800	10.0	17.6	115/230	37
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F-106Z	12.0CT	2.0	115/230	65
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F-237Z	12.0	1.000	115	58
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F24-100-C2	12.0	0.2	115	47
F24-1500	12.0	3.0	115	46
F24-1500-C2	12.0	3.0	115	48
F24-250	12.0	0.5	115	45
F24-250-C2	12.0	0.5	115	47
F24-500	12.0	1.0	115	45
F24-500-C2	12.0	1.0	115	47
F24-800	12.0	1.6	115	45
F24-800-C2	12.0	1.6	115	47
F-29U†	12.0CT	11.0	115	55
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F-359XP	12.0	0.900	115/230	53
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F-399U	12.0	12.0	115/230	65
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FP24-1000	12.0	2.0	115/230	43
FP24-2000	12.0	4.0	115/230	43
FP24-250	12.0	0.5	115/230	43
FP24-500	12.0	1.0	115/230	43
FS24-045	12.0	0.09	115/230	45
FS24-045-C2	12.0	0.09	115/230	47
FS24-100	12.0	0.2	115/230	45
FS24-100-C2	12.0	0.2	115/230	47
FS24-1500	12.0	3.0	115/230	46
FS24-1500-C2	12.0	3.0	115/230	48
FS24-250	12.0	0.5	115/230	45
FS24-250-C2	12.0	0.5	115/230	47
FS24-500	12.0	1.0	115/230	45
FS24-500-C2	12.0	1.0	115/230	47
FS24-800	12.0	1.6	115/230	45
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TCT40-03E07AB	12.0	3.3	120	63
TCT40-03E07AE	12.0	3.3	120	63
TCT40-03E07K	12.0	3.3	120	63
TCT40-04E07AB	12.0	3.3	240	63
TCT40-04E07AE	12.0	3.3	240	63
TCT40-04E07K	12.0	3.3	240	63
TCT40-07E07AB	12.0	3.3	120/208/240	63
TCT40-07E07AE	12.0	3.3	120/208/240	63
TCT40-07E07K	12.0	3.3	120/208/240	63
TCT40-08E07AB	12.0	3.3	120/240	63
TCT40-08E07AE	12.0	3.3	120/240	63
TCT40-08E07K	12.0	3.3	120/240	63
TCT40-10E07AB	12.0	3.3	208/240	63
TCT40-10E07AE	12.0	3.3	208/240	63
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TCT50-03E07AE	12.0	4.2	120	64
TCT50-03E07K	12.0	4.2	120	64
TCT50-04E07AB	12.0	4.2	240	64
TCT50-04E07AE	12.0	4.2	240	64
TCT50-04E07K	12.0	4.2	240	64
TCT50-07E07AB	12.0	4.2	120/208/240	64
TCT50-07E07AE	12.0	4.2	120/208/240	64
TCT50-07E07K	12.0	4.2	120/208/240	64
TCT50-08E07AB	12.0	4.2	120/240	64
TCT50-08E07AE	12.0	4.2	120/240	64
TCT50-08E07K	12.0	4.2	120/240	64
TCT50-10E07AB	12.0	4.2	208/240	64
TCT50-10E07AE	12.0	4.2	208/240	64
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F12-1600	12.6CT	1.6	115	45
F12-1600-C2	12.6CT	1.6	115	47
F12-200	12.6CT	0.2	115	45
F12-200-C2	12.6CT	0.2	115	51
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F-139P	12.6CT	0.12	115	51
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F-158XP	12.6	0.60	115	51
F-159XP	12.6CT	0.60	115	51
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F-183U	12.6CT	8.000	115/230	56
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F-26X	12.6CT	2.500	115	56
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F-3181U	12.6CT	4.000	115/230	56
F-325X	12.6CT	1.500	115/230	56
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VPP12-1600	12.6CT	1.6	115/230	35
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VPP12-4400	12.6CT	4.4	115/230	35
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F28-200-C2	14.0	0.4	115	47
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FS28-1300-C2	14.0	2.6	115/230	48
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FS28-420	14.0	0.84	115/230	45
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F-143XP	15.0	0.300	115	51
F-152XP	15.0CT	0.500	115	51
F-153XP	15.0	0.500	115	51
F-167P	15.0CT	0.060	115	51
F-168XP	15.0CT	0.195	115	51
F-169XP	15.0CT	0.287	115	51
F-197U	15.0CT	4.0	115	58
F-198U	15.0CT	6.000	115	58
F-3132P	15.0CT	0.1	115/230	53
F-3142XP	15.0CT	0.3	115/230	53
F-3143XP	15.0	0.3	115/230	53
F-3152XP	15.0CT	0.5	115/230	53
F-3153XP	15.0	0.5	115/230	53
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VPT30-5330	15.0	10.66	115/230	41
VPT30-830	15.0	1.66	115/230	41
F-195X	15.5CT	0.750	115	58
F-196U	15.5CT	2.000	115	58
F16-070	16.0CT	0.07	115	45
F16-070-C2	16.0CT	0.07	115	47
F16-1250	16.0CT	1.25	115	45
F16-1250-C2	16.0CT	1.25	115	47
F16-150	16.0CT	0.15	115	45
F16-150-C2	16.0CT	0.15	115	47
F16-2250	16.0CT	2.25	115	46
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F16-400	16.0CT	0.4	115	45
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F-366XP	16.0CT	0.640	115/230	53
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FS16-150	16.0CT	0.15	115/230	45
FS16-150-C2	16.0CT	0.15	115/230	47
FS16-2250	16.0CT	2.25	115/230	46
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F-157XP	20.0	0.376	115	51
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F20-1000-C2	20.0CT	1.0	115	47
F20-120	20.0CT	0.12	115	45
F20-120-C2	20.0CT	0.12	115	47
F20-1800	20.0CT	1.8	115	46
F20-1800-C2	20.0CT	1.8	115	48
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F20-600-C2	20.0CT	0.6	115	47
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F-255X	20.0	2.000	115	56
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F-357X	25.2CT	1.000	115/230	56
F-41X	25.2CT	2.000	115/230	56
F-56X	25.2CT	2.800	115	56
F-57X	25.2CT	1.000	117	56
VPL25-1000	25.2CT	0.990	115/230	39
VPL25-1900	25.2CT	1.984	115/230	39
F-360U	26.0	3.0	115/230	59
F-119X	26.8CT	0.150	115	56
F-340X	26.8CT	1.000	115/230	56
F-355X	26.8CT	1.700	115/230	56
F-40X	26.8CT	1.000	115	56
F-55X	26.8CT	1.700	115	56
VPL26-1800	26.8CT	1.866	115/230	39
VPL26-190	26.8CT	0.19	115/230	39
VPL26-930	26.8CT	0.93	115/230	39
F-134P	27.0	0.056	115	51
F-144XP	27.0	0.168	115	51
F-154XP	27.0	0.280	115	51
F-361U	27.0	3.0	115/230	59
F-122X	28.0CT	0.175	115	56
F-124X	28.0CT	0.800	115	56
F-184X	28.0CT	1.000	115	56
F-187U	28.0CT	4.000	115	56
F28-040	28.0CT	0.040	115	45
F28-040-C2	28.0CT	0.040	115	47
F28-085	28.0CT	0.085	115	45
F28-085-C2	28.0CT	0.085	115	47
F28-1300	28.0CT	1.3	115	46
F28-1300-C2	28.0CT	1.3	115	48
F28-200	28.0CT	0.2	115	45
F28-200-C2	28.0CT	0.2	115	47
F28-420	28.0CT	0.42	115	45
F28-420-C2	28.0CT	0.42	115	47
F28-700	28.0CT	0.7	115	45
F28-700-C2	28.0CT	0.7	115	47
F-3185U	28.0CT	2.000	115/230	56
F3-28	28.0CT	0.085	115	49
F-375P	28.0CT	0.8	115/230	53
F-378P	28.0	0.84	115/230	53
F4-28	28.0CT	0.2	115	49
F5-28	28.0CT	0.42	115	49
F56-020	28.0	0.04	115	45
F56-020-C2	28.0	0.04	115	47
F56-045	28.0	0.09	115	45
F56-045-C2	28.0	0.09	115	47
F56-110	28.0	0.22	115	45
F56-110-C2	28.0	0.220	115	47
F56-220	28.0	0.44	115	45
F56-220-C2	28.0	0.44	115	47
F56-350	28.0	0.7	115	45
F56-350-C2	28.0	0.7	115	47
F56-650	28.0	1.3	115	46
F56-650-C2	28.0	1.3	115	48
F6-28	28.0CT	1.1	115	49
F7-28	28.0CT	2.0	115	49
F8-28	28.0CT	3.6	115	50
FD4-28	28.0CT	0.2	115/230	49
FD5-28	28.0CT	0.42	115/230	49
FD6-28	28.0CT	1.1	115/230	49
FD7-28	28.0CT	2.0	115/230	49
FD8-28	28.0CT	3.6	115/230	50
FP56-100	28.0	0.2	115/230	43
FP56-200	28.0	0.4	115/230	43
FP56-425	28.0	0.85	115/230	43
FP56-45	28.0	0.09	115/230	43
FP56-850	28.0	1.7	115/230	43
FS28-040	28.0CT	0.040	115/230	45
FS28-040-C2	28.0CT	0.040	115/230	47
FS28-085	28.0CT	0.085	115/230	45
FS28-085-C2	28.0CT	0.085	115/230	47
FS28-1300	28.0CT	1.3	115/230	46
FS28-1300-C2	28.0CT	1.3	115/230	48
FS28-200	28.0CT	0.2	115/230	45
FS28-200-C2	28.0CT	0.2	115/230	47
FS28-420	28.0CT	0.42	115/230	45
FS28-420-C2	28.0CT	0.42	115/230	47
FS28-700	28.0CT	0.7	115/230	45
FS28-700-C2	28.0CT	0.7	115/230	47
FS56-020	28.0	0.04	115/230	45
FS56-020-C2	28.0	0.04	115/230	47
FS56-045	28.0	0.09	115/230	45
FS56-045-C2	28.0	0.09	115/230	47
FS56-110	28.0	0.22	115/230	45
FS56-110-C2	28.0	0.22	115/230	47
FS56-220	28.0	0.44	115/230	45
FS56-220-C2	28.0	0.44	115/230	47
FS56-350	28.0	0.7	115/230	45
FS56-350-C2	28.0	0.7	115/230	47
FS56-650	28.0	1.3	115/230	46
FS56-650-C2	28.0	1.3	115/230	48
VPL28-1700	28.0CT	1.786	115/230	39
VPL28-180	28.0CT	0.18	115/230	39
VPL28-2000	28.0CT	2.000	115/230	39
VPL28-350	28.0CT	0.350	115/230	39
VPL28-900	28.0CT	0.89	115/230	39
VPP28-090	28.0CT	0.09	115/230	35
VPP28-1060	28.0CT	1.06	115/230	35
VPP28-180	28.0CT	0.18	115/230	35
VPP28-2000	28.0CT	2.0	115/230	35
VPP28-360	28.0CT	0.36	115/230	35
VPP28-720	28.0CT	0.72	115/230	35
VPS28-1500	28.0CT	1.5	115/230	37
VPS28-2800	28.0CT	2.8	115/230	37
VPS28-4600	28.0CT	4.6	115/230	37
VPS28-900	28.0CT	0.9	115/230	37
VPS56-2300	28.0	4.6	115/230	37
VPS28-6250	28.0CT	6.25	115/230	37
F-133P	30.0CT	0.050	115	51
F-143XP	30.0CT	0.150	115	51
F-153XP	30.0CT	0.250	115	51
F-3143XP	30.0CT	0.15	115/230	53
F-3153XP	30.0CT	0.25	115/230	53
F-333P	30.0CT	0.050	115/230	53
F-361U	30.0	3.0	115/230	59
FP30-1600	30.0CT	1.6	115/230	43
FP30-200	30.0CT	0.2	115/230	43

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FP30-400	30.0CT	0.4	115/230	43
FP30-800	30.0CT	0.80	115/230	43
FP30-85	30.0CT	0.08	115/230	43
VPT30-1670	30.0CT	1.67	115/230	41
VPT30-3330	30.0CT	3.33	115/230	41
VPT30-5330	30.0CT	5.33	115/230	41
VPT30-830	30.0CT	0.83	115/230	41
F-167P	32.0CT	0.020	115	51
F-168XP	32.0CT	0.050	115	51
F-169XP	32.0CT	0.100	115	51
F-195X	32.0CT	0.250	115	58
F-196U	32.0CT	1.000	115	58
F-197U	32.0CT	1.000	115	58
F-198U	32.0CT	1.000	115	58
F-361U	33.0	3.0	115/230	59
F-160P	34.0CT	0.045	115	51
F-162XP	34.0CT	0.132	115	51
F-164XP	34.0CT	0.220	115	51
F-376P	34.0CT	0.7	115/230	53
FP34-1400	34.0CT	1.4	115/230	43
FP34-170	34.0CT	0.17	115/230	43
FP34-340	34.0CT	0.34	115/230	43
FP34-700	34.0CT	0.70	115/230	43
FP34-75	34.0CT	0.075	115/230	43
F-188X	35.0CT	0.100	115	56
F-189X	35.0CT	0.500	115	56
F-191U	35.0CT	4.000	115	56
F-268U	35.0CT	8.000	115	56
F-228X	35.0CT	0.300	115	56
F-354X	35.0CT	1.500	115/230	56
F-54X	35.0CT	1.500	115	56
F3-36	36.0CT	0.065	115	49
F36-030	36.0CT	0.03	115	45
F36-030-C2	36.0CT	0.03	115	47
F36-065	36.0CT	0.065	115	45
F36-065-C2	36.0CT	0.065	115	47
F36-1000	36.0CT	1.0	115	46
F36-1000-C2	36.0CT	1.0	115	48
F36-170	36.0CT	0.17	115	45
F36-170-C2	36.0CT	0.17	115	47
F-361U	36.0	3.0	115/230	59
F36-350	36.0CT	0.35	115	45
F36-350-C2	36.0CT	0.35	115	47
F36-550	36.0CT	0.55	115	45
F36-550-C2	36.0CT	0.55	115	47
F4-36	36.0CT	0.17	115	49
F5-36	36.0CT	0.35	115	49
F6-36	36.0CT	0.85	115	49
F7-36	36.0CT	1.5	115	49
F8-36	36.0CT	2.8	115	50
FD4-36	36.0CT	0.17	115/230	49
FD5-36	36.0CT	0.35	115/230	49
FD6-36	36.0CT	0.85	115/230	49
FD7-36	36.0CT	1.5	115/230	49
FD8-36	36.0CT	2.8	115/230	50
FS36-030	36.0CT	0.03	115/230	45
FS36-030-C2	36.0CT	0.03	115/230	47
FS36-065	36.0CT	0.065	115/230	45
FS36-065-C2	36.0CT	0.065	115/230	47
FS36-1000	36.0CT	1.0	115/230	46
FS36-1000-C2	36.0CT	1.0	115/230	48
FS36-170	36.0CT	0.17	115/230	45
FS36-170-C2	36.0CT	0.17	115/230	47
FS36-350	36.0CT	0.35	115/230	45
FS36-350-C2	36.0CT	0.35	115/230	47
FS36-550	36.0CT	0.55	115/230	45
FS36-550-C2	36.0CT	0.55	115/230	47
VPL36-140	36.0CT	0.14	115/230	39
VPL36-1400	36.0CT	1.389	115/230	39
VPL36-300	36.0CT	0.28	115/230	39
VPL36-700	36.0CT	0.7	115/230	39
VPP36-070	36.0CT	0.07	115/230	35
VPP36-140	36.0CT	0.14	115/230	35
VPP36-1560	36.0CT	1.56	115/230	35
VPP36-280	36.0CT	0.28	115/230	35
VPP36-560	36.0CT	0.56	115/230	35
VPP36-820	36.0CT	0.82	115/230	35
VPS36-1200	36.0CT	1.2	115/230	37
VPS36-2200	36.0CT	2.2	115/230	37
VPS36-3600	36.0CT	3.6	115/230	37
VPS36-4800	36.0CT	4.8	115/230	37
VPS36-700	36.0CT	0.7	115/230	37
VPT36-1390	36.0CT	1.39	115/230	41
VPT36-2780	36.0CT	2.78	115/230	41
VPT36-4440	36.0CT	4.44	115/230	41
VPT36-690	36.0CT	0.69	115/230	41
VPT36-6940	36.0CT	6.94	115/230	41
F-135P	38.0	0.040	115	51
F-145XP	38.0	0.120	115	51
F-155XP	38.0	0.200	115	51
F-137P	40.0CT	0.038	115	51
F-147XP	40.0CT	0.112	115	51
F-157XP	40.0CT	0.188	115	51
F-270X	40.0CT	1.000	115	57
F-271U	40.0CT	2.000	115	57
F-272U	40.0CT	4.000	115	57
F-273U	40.0CT	6.000	115	57
F-275U	40.0CT	10.000	115	57
F-377P	40.0CT	0.6	115/230	53
FP40-1200	40.0CT	1.2	115/230	43
FP40-150	40.0CT	0.15	115/230	43
FP40-300	40.0CT	0.3	115/230	43
FP40-60	40.0CT	0.06	115/230	43
FP40-600	40.0CT	0.60	115/230	43
FP88-130	44.0	0.26	115/230	43
FP88-28	44.0	0.056	115/230	43
FP88-65	44.0	0.13	115/230	43
F-211Z	48.0CT	0.25	115/230	65
F-212Z	48.0CT	0.50	115/230	65
F-213Z	48.0CT	1.0	115/230	65
F-214U	48.0CT	2.0	115/230	65
F-215U	48.0CT	4.0	115/230	65
F3-48	48.0CT	0.05	115	49
F-400U	48.0CT	3.0	115/230	65
F4-48	48.0CT	0.125	115	49
F48-023	48.0CT	0.023	115	45
F48-023-C2	48.0CT	0.023	115	47
F48-050	48.0CT	0.05	115	45
F48-050-C2	48.0CT	0.05	115	47
F48-125	48.0CT	0.125	115	45
F48-125-C2	48.0CT	0.125	115	47
F48-250	48.0CT	0.25	115	45
F48-250-C2	48.0CT	0.25	115	47
F48-400	48.0CT	0.4	115	45
F48-400-C2	48.0CT	0.4	115	47
F48-750	48.0CT	0.75	115	46
F48-750-C2	48.0CT	0.75	115	48
F5-48	48.0CT	0.25	115	49
F6-48	48.0CT	0.63	115	49
F7-48	48.0CT	1.2	115	49
F8-48	48.0CT	2.0	115	50
FD4-48	48.0CT	0.125	115/230	49
FD5-48	48.0CT	0.25	115/230	49
FD6-48	48.0CT	0.63	115/230	49
FD7-48	48.0CT	1.2	115/230	49
FD8-48	48.0CT	2.0	115/230	50
FS48-023	48.0CT	0.023	115/230	45
FS48-023-C2	48.0CT	0.023	115/230	47
FS48-050	48.0CT	0.05	115/230	45
FS48-050-C2	48.0CT	0.05	115/230	47
FS48-125	48.0CT	0.125	115/230	45
FS48-125-C2	48.0CT	0.125	115/230	47
FS48-250	48.0CT	0.25	115/230	45
FS48-250-C2	48.0CT	0.25	115/230	47
FS48-400	48.0CT	0.4	115/230	45
FS48-400-C2	48.0CT	0.4	115/230	47
FS48-750	48.0CT	0.75	115/230	46
FS48-750-C2	48.0CT	0.75	115/230	48
VPT48-1040	48.0CT	1.04	115/230	41
VPT48-10400	48.0CT	10.4	115/230	41
VPT48-2080	48.0CT	2.08	115/230	41
VPT48-20830	48.0CT	20.83	115/230	41
VPT48-3300	48.0CT	3.33	115/230	41
VPT48-520	48.0CT	0.52	115/230	41
VPT48-5200	48.0CT	5.20	115/230	41
VPT100-10000	50.0	20.0	115/230	41
VPT100-25000	50.0	50.0	115/230	41
VPT100-5000	50.0	10.0	115/230	41
F-134P	54.0CT	0.028	115	51
F-144XP	54.0CT	0.084	115	51
F-154XP	54.0CT	0.140	115	51
F3-56	56.0CT	0.045	115	49
F-378P	56.0CT	0.42	115/230	53
F4-56	56.0CT	0.11	115	49
F5-56	56.0CT	0.22	115	49
F56-020	56.0CT	0.02	115	45
F56-020-C2	56.0CT	0.02	115	47
F56-045	56.0CT	0.045	115	45
F56-045-C2	56.0CT	0.045	115	47
F56-110	56.0CT	0.11	115	45
F56-110-C2	56.0CT	0.11	115	47
F56-220	56.0CT	0.22	115	45
F56-220-C2	56.0CT	0.22	115	47
F56-350	56.0CT	0.35	115	45
F56-350-C2	56.0CT	0.35	115	47
F56-650	56.0CT	0.65	115	46
F56-650-C2	56.0CT	0.65	115	48
F6-56	56.0CT	0.54	115	49
F7-56	56.0CT	1.0	115	49
F8-56	56.0CT	1.8	115	50
FD4-56	56.0CT	0.11	115/230	49
FD5-56	56.0CT	0.22	115/230	49
FD6-56	56.0CT	0.54	115/230	49
FD7-56	56.0CT	1.0	115/230	49
FD8-56	56.0CT	1.8	115/230	50
FP56-100	56.0CT	0.1	115/230	43
FP56-200	56.0CT	0.2	115/230	43
FP56-425	56.0CT	0.425	115/230	43
FP56-45	56.0CT	0.045	115/230	43
FP56-850	56.0CT	0.85	115/230	43
FS56-020	56.0CT	0.02	115/230	45
FS56-020-C2	56.0CT	0.02	115/230	47
FS56-045	56.0CT	0.045	115/230	45
FS56-045-C2	56.0CT	0.045	115/230	47
FS56-110	56.0CT	0.11	115/230	45
FS56-110-C2	56.0CT	0.11	115/230	47
FS56-220	56.0CT	0.22	115/230	45
FS56-220-C2	56.0CT	0.22	115/230	47
FS56-350	56.0CT	0.35	115/230	45
FS56-350-C2	56.0CT	0.35	115/230	47
FS56-650	56.0CT	0.65	115/230	46
FS56-650-C2	56.0CT	0.65	115/230	48
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F-156XP	58.0	0.130	115	51
F120-010	60.0	0.02	115	45
F120-020	60.0	0.04	115	45
F120-050	60.0	0.1	115	45
F120-100	60.0	0.2	115	45
F120-160	60.0	0.32	115	45
F120-300	60.0	0.6	115	46
F-279U	60.0CT	1.000	115	57
F-280U	60.0CT	2.000	115	57
F-282U	60.0CT	6.000	115	57
F-379P	60.0	0.4	115/230	53
F-59X	60.0CT	0.400	115	57
FP120-100	60.0	0.2	115/230	43
FP120-20	60.0	0.04	115/230	43
FP120-50	60.0	0.1	115/230	43
FS120-01	60.0	0.02	115/230	45
FS120-02	60.0	0.04	115/230	45
FS120-05	60.0	0.1	115/230	45
FS120-100	60.0	0.2	115/230	45
FS120-160	60.0	0.32	115/230	45
FS120-300	60.0	0.6	115/230	46
F-135P	76.0CT	0.020	115	51
F-145XP	76.0CT	0.060	115	51
F-155XP	76.0CT	0.100	115	51
FP88-130	88.0CT	0.13	115/230	43
FP88-28	88.0CT	0.028	115/230	43
FP88-65	88.0CT	0.065	115/230	43
VPT100-10000	100.0CT	10.0	115/230	41
VPT100-25000	100.0CT	25.0	115/230	41
VPT100-5000	100.0CT	5.0	115/230	41
F-302U	115.0	1.30	277	60
F-363XP	115.0	0.040	115/230	53
F-367P	115.0	0.013	115/230	53
F-369XP	115.0	0.088	115/230	53
FP230-10	115.0	0.02	115/230	43
FP230-25	115.0	0.05	115/230	43
FP230-50	115.0	0.1	115/230	43
N-11MG	115.0	17.40	230	60
N-1X	115.0	0.435	230	60
N-255MG	115.0	2.17	230	61
N-257MG	115.0	4.35	230	62
N-259MG	115.0	8.70	230	62
N-2X	115.0	0.87	230	60
N-3MG	115.0	0.74	230	60
N-48X	115.0	0.13	115	61
N-4MG	115.0	1.30	230	60
N-51X	115.0	0.3	115	61
N-53MG	115.0	0.74	115	61
N-54MG	115.0	1.3	115	61
N-55M	115.0	2.17	115	61
N-55MG	115.0	2.17	115	61
N-57M	115.0	4.35	115	61
N-57MG	115.0	4.35	115	62
N-59M	115.0	8.70	115	62
N-59MG	115.0	8.70	115	62
N-5MG	115.0	2.17	230	60
N-66A	115.0	2.17	115/230	61
N-67A	115.0	1.3	115/230	61
N-68X	115.0	0.435	115/230	61
N-6U	115.0	1.70	230	60
N-73A	115.0	1.3	115	61
N-76U	115.0	0.86	115	61
N-77U	115.0	0.86	115/230	61
N-7MG	115.0	5.22	230	60
N-90MD	115.0	2.17	115	62
N-92MD	115.0	4.35	115	62
N-9MG	115.0	10.85	230	60
VPS230-110	115.0	0.22	115/230	37
VPS230-190	115.0	0.38	115/230	37
VPS230-350	115.0	0.7	115/230	37
VPS230-570	115.0	1.14	115/230	37
VPS230-760	115.0	1.52	115/230	37
VPT230-10870	115.0	21.74	115/230	41
VPT230-1090	115.0	2.18	115/230	41
VPT230-110	115.0	0.22	115/230	41
VPT230-2170	115.0	4.34	115/230	41
VPT230-220	115.0	0.44	115/230	41
VPT230-430	115.0	0.86	115/230	41
VPT230-4350	115.0	8.70	115/230	41
VPT230-700	115.0	1.40	115/230	41
F-136P	116.0CT	0.013	115	51
F-146XP	116.0CT	0.033	115	51
F-156XP	116.0CT	0.085	115	51
F120-010	120.0CT	0.01	115	45
F120-020	120.0CT	0.02	115	45
F120-050	120.0CT	0.05	115	45
F120-100	120.0CT	0.1	115	45
F120-160	120.0CT	0.16	115	45
F120-300	120.0CT	0.3	115	46
F3-120	120.0CT	0.02	115	49
F-379P	120.0CT	0.2	115/230	53
F4-120	120.0CT	0.05	115	49
F5-120	120.0CT	0.1	115	49
F6-120	120.0CT	0.25	115	49
F7-120	120.0CT	0.5	115	49
F8-120	120.0CT	0.85	115	50
FD4-120	120.0CT	0.05	115/230	49
FD5-120	120.0CT	0.1	115/230	49
FD6-120	120.0CT	0.25	115/230	49
FD7-120	120.0CT	0.5	115/230	49
FD8-120	120.0CT	0.85	115/230	50
FP120-100	120.0CT	0.1	115/230	43
FP120-20	120.0CT	0.02	115/230	43
FP120-50	120.0CT	0.05	115/230	43
FS120-01	120.0CT	0.01	115/230	45
FS120-02	120.0CT	0.02	115/230	45
FS120-05	120.0CT	0.05	115/230	45
FS120-100	120.0CT	0.1	115/230	45
FS120-160	120.0CT	0.16	115/230	45
FS120-300	120.0CT	0.3	115/230	46
F-363XP	230.0CT	0.020	115/230	53
F-367P	230.0CT	0.0065	115/230	53
F-369XP	230.0CT	0.044	115/230	53
FP230-10	230.0CT	0.01	115/230	43
FP230-25	230.0CT	0.025	115/230	43
FP230-50	230.0CT	0.05	115/230	43
N-1000MG	230.0	4.35	115	60
N-150MG	230.0	0.65	115	60
N-250MG	230.0	1.10	115	60
N-500MG	230.0	2.20	115	60
N-73A	230.0	0.65	115	61
VPS230-110	230.0CT	0.11	115/230	37
VPS230-190	230.0CT	0.19	115/230	37
VPS230-350	230.0CT	0.35	115/230	37
VPS230-570	230.0CT	0.57	115/230	37
VPS230-760	230.0CT	0.76	115/230	37
VPT230-10870	230.0CT	10.87	115/230	41
VPT230-1090	230.0CT	1.09	115/230	41
VPT230-110	230.0CT	0.11	115/230	41
VPT230-2170	230.0CT	2.17	115/230	41
VPT230-220	230.0CT	0.22	115/230	41
VPT230-430	230.0CT	0.43	115/230	41
VPT230-4350	230.0CT	4.35	115/230	41
VPT230-700	230.0CT	0.70	115/230	41

RoHS Compliance

Triad Magnetics; a recognized leader in the magnetics industry for decades, has once again stepped out in front of the crowd by ensuring all of our catalog products are free of the hazardous materials called out in 2011/65/EU, known as the RoHS Initiative.

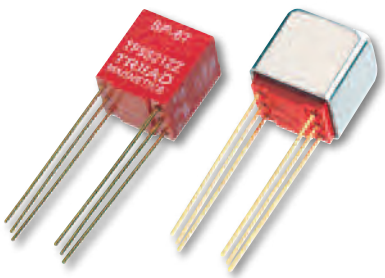
Reach Compliance

As the European Chemicals Agency (ECHA) identifies additional Substances of Very High Concern, Triad Magnetics will continue to review its processes. Triad is committed to keeping all SVHC out of the marketplace and restricting the use of these in our production facilities.

Please contact us at 951-277-0757 or consult our website at TriadMagnetics.com for any exceptions as well as compliance effective date codes for specific part numbers.

Audio Transformers

Mil-T-27E



Red Spec (MIL-T-27E)

:: Description

Triad high reliability audio transformers provide the durability and precision required in today's demanding designs. These transformers are available for a wide variety of applications. The line of Red Spec audio transformers is designed and constructed to meet the rigid requirements of MIL-T-27E. These transformers feature an epoxy molded case, gold plated leads and exceptional operation from 300 Hz to 100 kHz.

:: Specifications

Frequency Response Ranges: 300 Hz to 100 kHz

:: Red Spec Printed Circuit Audio Transformers

Section	Type No.	Mil Type No.	Power Level in mW	Matching Impedance Primary	Matching Impedance Secondary	Max. mA DC Unbalanced in Primary	DC Resistance Primary	DC Resistance Secondary	Overall Turns Ratio	Figure No.
A	**SP-4**	TF5S21ZZ	10	200,000 CT	1,000 CT	0.0	5,300.0	100.0	14.1:1.0	3
B	**SP-5**	TF5S21ZZ	25	50,000 CT	1,000 CT	0.0	3,800.0	75.0	7.1:1.0	3
C	**SP-13**	TF5S21ZZ	40	25,000 CT/20,000 CT	1,000/800 CT	0.5	1,700.0	115.0	5.0:1.0	3
D	**SP-20**	TF5S21ZZ	50	10,000 CT	1,200 CT	1.0	1,050.0	200.0	2.88:1.0	3
	SP-21	TF5S21ZZ	50	10,000 CT	2,000 CT	1.0	1,050.0	330.0	2.24:1.0	3
	SP-22	TF5S21ZZ	50	10,000	2,000 CT/500§	1.0	1,050.0	146.0/168.0§	4.48:1.0:1.0	4
	SP-29	TF5S21ZZ	50	10,000 CT	500 CT	1.0	1,050.0	80.0	4.47:1.0	3
	SP-32	TF5S21ZZ	50	500	50	3.0	60	8	3.15:1.0	1
	SP-33	TF5S21ZZ	50	1,000	50	3.0	145.0	8.0	4.4:1.0	1
	SP-42	TF5S21ZZ	50	150 CT	12	10.0	18.0	2.7	3.54:1.0	2
	SP-48	TF5S21ZZ	50	7,500 CT	12	1.0	796.0	2.9	25.0:1.0	2
	SP-49	TF5S21ZZ	50	300 CT	600	7.0	41.0	98.0	1.0:1.42	2
	SP-50	TF5S21ZZ	50	500 CT	600	3.0	67.0	98.0	1.0:1.1	2
	SP-51	TF5S21ZZ	50	900 CT	600	4.0	104.0	96.0	1.22:1.0	2
	SP-52	TF5S21ZZ	50	1,500 CT	600	3.0	168.0	92.0	1.58:1.0	2
	SP-66	TF5S21ZZ	50	10,000 CT	10,000 CT	1.0	1,000.0	1,300.0	1.0:1.0	3
	SP-67	TF5S21ZZ	50	600 CT	600 CT	3.0	72.0	92.0	1.0:1.0	3
	SP-68	TF5S21ZZ	50	10,000	10,000 CT/2,500§	1.0	1,000.0	565.0/650.0§	2.1:1.0	4
	SP-69	TF5S21ZZ	50	600	600 CT/150§	3.0	72.0	40.0/45.0§	2.0:1.0:1.0	4
	SP-70	TF5S21ZZ	50	600	600	3.0	72.0	92.0	1.0:1.0	1
E	**SP-128** **SP-310**	TF5S21ZZ Mu Shield Only	•	0.1H	•	5.0	15.0	•	•	5

CT = Center Tap § Split secondary

:: Outline Dimensions

Technical Notes

1. Plug-in terminals are precision spaced to provide fixed mounting centers.
2. Red Spec transformers are hi-pot tested at 1,000 VRMS.
3. 150 VDC working voltage.
4. Red Spec transformers feature small footprint base dimensions of .310 by .410 inch.
5. Pin diameter = .020 inch.

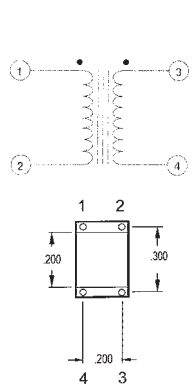


Figure 1

CT Primary

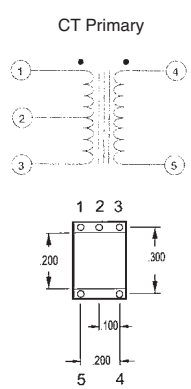


Figure 2

Tap Primary - Tap Secondary

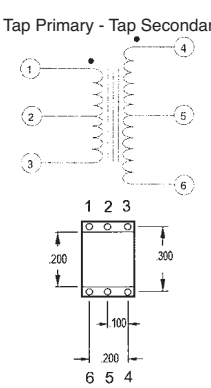


Figure 3

Split Windings

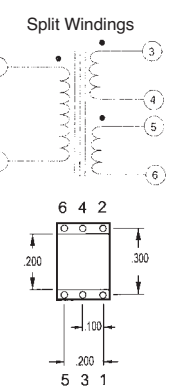


Figure 4

Inductor

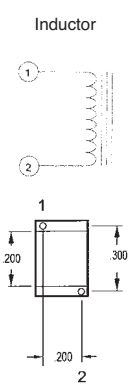


Figure 5

Audio Transformers

PC Mount

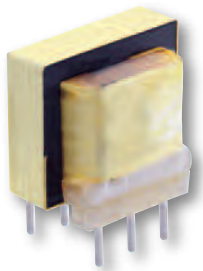


Figure A

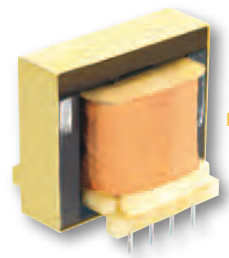


Figure B

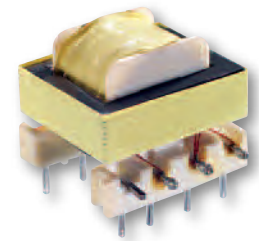


Figure C

:: Description

Triad produces a wide assortment of audio transformers for use in printed circuit designs. These transformers fill a broad application spectrum in the audio industry. Triad audio printed circuit transformers are used in line matching, telephone coupling, pulse trigger, interstage, output, isolation and input applications.

:: Specifications

Frequency Response Range From: 20 - 20,000 Hz
Impedance Matching: 10% over frequency range

:: Plug-in Printed Circuit Audio Transformers

Section	Type No.	Output mW	Primary Impedance	Secondary Impedance	Figure	Pri. DC Unbalance	Dimensions H	W	L	A	B	C	D	J	Wt. Oz.
A	TY-141P	100	10,000 CT	10,000 CT	A	4mA	0.740	0.812	0.700	0.421	0.421	0.187	•	0.042	0.51
	TY-142P	100	10,000 CT	2,000 CT	A	4mA	0.740	0.812	0.700	0.421	0.421	0.187	•	0.042	0.51
	TY-144P	100	15,000 CT	15,000 CT	A	4mA	0.740	0.812	0.700	0.421	0.421	0.187	•	0.042	0.51
	TY-145P	100	600 CT	600 CT	A	15mA	0.740	0.812	0.700	0.421	0.421	0.187	•	0.042	0.51
	TY-146P	1000	600 CT/150§	600 CT/150§	B	•	1.187	1.187	1.375	0.203	1.031	0.187	•	0.042	3.0
	TY-250P	20	1000 CT	1000 CT/250§*	C	4mA	0.700	0.900	0.770	0.200	0.520	0.200	0.150	0.025	0.4

*§ Split secondary * 600:600Ω, 10K:10KΩ, 100K:100KΩ, 1M:1MΩ, and other impedances are optional as long as input voltage is ≤4.2Vrms and current is ≤7mA.*

Technical Notes

1. Plug-in terminals are spaced to provide fixed mounting centers.

Figure A

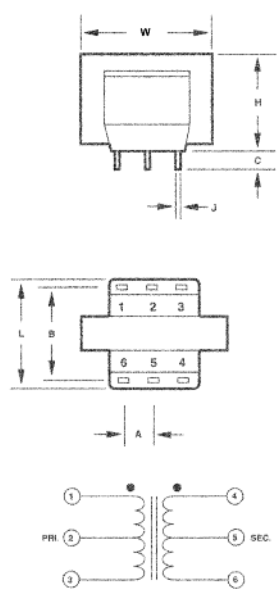


Figure B

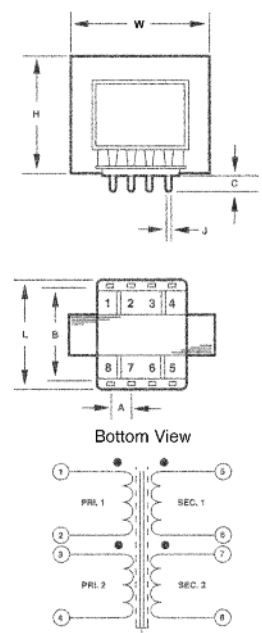
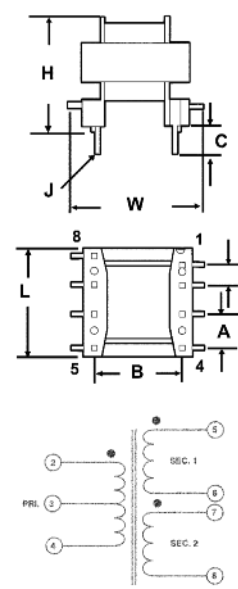


Figure C



Audio Transformers

Data / Voice Coupling

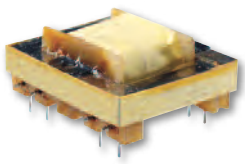


Figure A

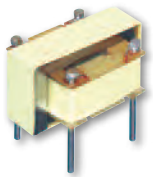


Figure B

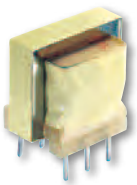


Figure C


Figure D

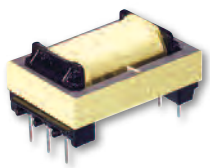


Figure E

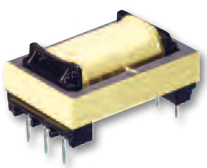


Figure F

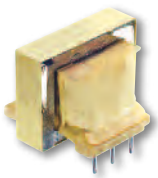


Figure G

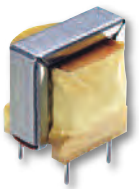


Figure H

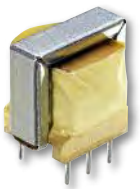


Figure I

:: Description

Triad telecommunications transformers are designed to meet the requirements for access over leased private lines or through the dial-up switched telephone network. The TY series transformers are used for a variety of applications including impedance matching, isolation, repeat coil, line balancing, bridging, and hybrid circuits.

:: Specifications

Designed to meet FCC Part 68
Longitudinal Balance: (FCC 68.310) - 60 dB min. 200 - 1,000 Hz
45 dB min. 1,000 - 4,000 Hz
Dielectric Strength: (FCC 68.304) - 1,500 V
Power Level: -45 dBm to +7 dBm
Frequency Range: Data / Voice = 300 to 3,500 Hz
Data = 800 to 3,500 Hz

:: Data/Voice Coupling Transformers

Section	Type No.	Impedance Ohms Pri.	Impedance Ohms Sec.	Max. DC Current (mA)	Typ. Insertion Loss (dB)	Typ. Return Loss (dB)	Typ. Freq. Response (dB)	Schematic	Figure
A	TY-305P	600	600	100	1.5	10	±.5	1	A
B	TY-306P	600 Split	600	75	1.5	10	±.5	2	A
C	TY-307P	600	600	0	1.0	26	±.5	3	B
D	TY-311P	600	600	0	1.0	26	±.5	3	D
E	TY-304P	600 CT	600 CT	0	1.0	26	±.5	4	C
F	TY-301P	600	900	0	1.0	26	±.5	5	D
G	TY-303P	4000	600	0	1.0	26	±.5	6	D

CT = Center Tap

:: Data/Voice Coupling Transformers

Section	Type No.	Impedance (Ohms) Pri.	Impedance (Ohms) Sec.	Max. DC Current (mA)	Typ. Insertion Loss (dB)	Typ. Return Loss (dB)	Typ. Freq. Response (dB)	Schematic	Figure
H	TY-400P	600	600	90	1.75	15	±.5	3	H
I	TY-401P	600 CT	600 CT	90	1.75	15	±.5	4	I
J	TY-402P	600	600	90	1.75	13	±.5	7	E
K	TY-403P	600	600 Split	90	1.75	13	±.5	8	F

CT = Center Tap

:: Data/Voice Single Transformer Hybrids

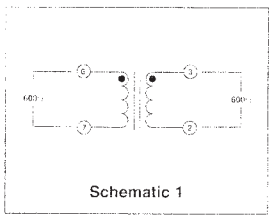
Section	Type No.	Impedance (Ohms) Pri.	Impedance (Ohms) Sec.	Max. DC Current (mA)	Typ. Insertion Loss (dB)	Typ. Return Loss (dB)	Trans-Hybrid Loss (dB)	Schematic	Figure
L	TY-300P	600 (4W)	600/600	0	.80	30	50	9	C
M	TY-302P	600 (4W)	600/600	0	.65	32	55	9	G

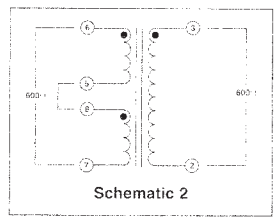
:: Outline Dimensions

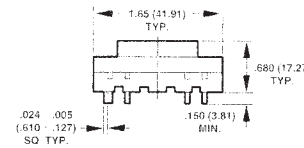
Technical Notes

Primary connections shown on left side of schematics.

Figure A







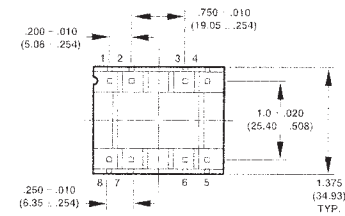
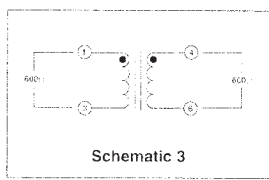
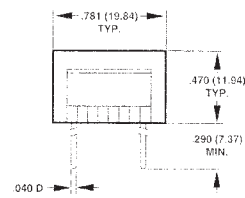


Figure B





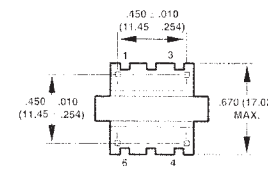
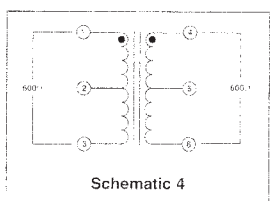
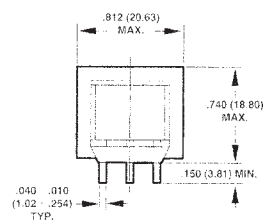


Figure C





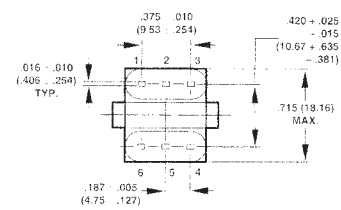
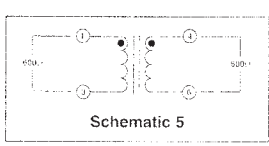
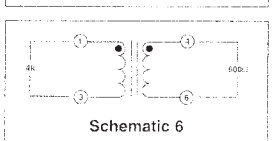
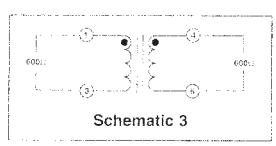
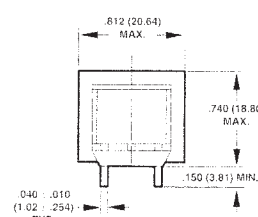


Figure D









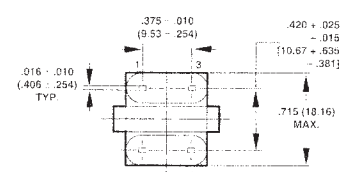
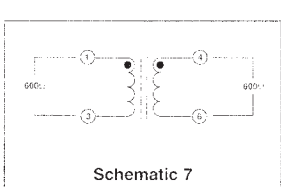
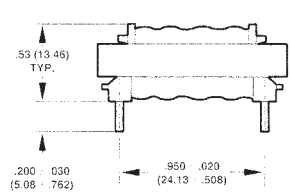
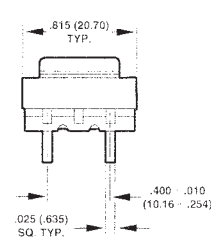
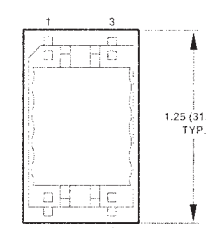


Figure E



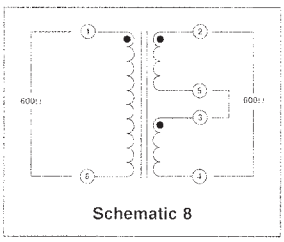






:: Outline Dimensions

Figure F



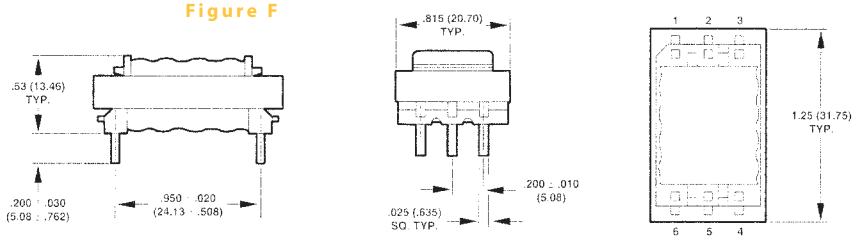
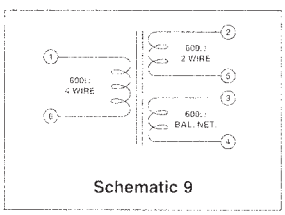


Figure G



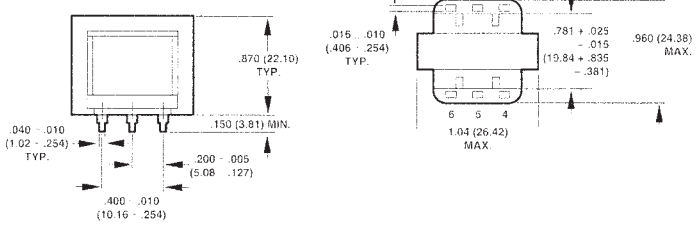
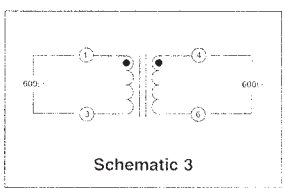


Figure H



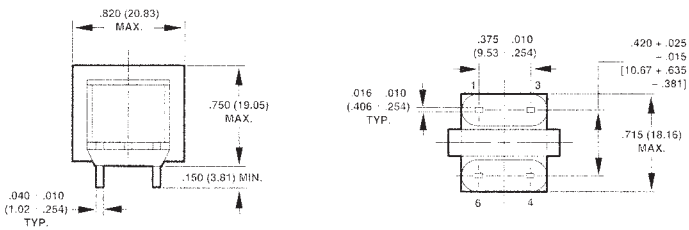
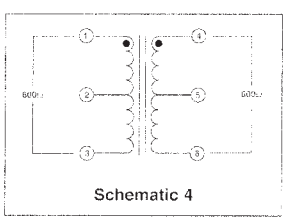
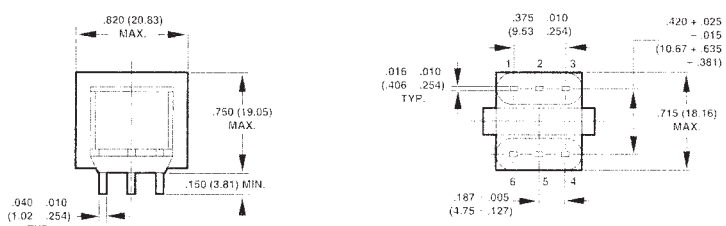


Figure I



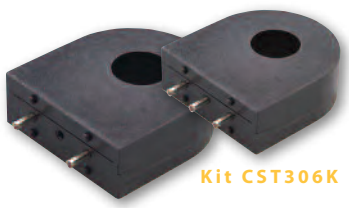


Sample Kits

Engineering Development / Design

:: Description

These kits contain representative samples of all our high frequency inductors and transformers organized by product type. The kits include all values, packaging styles and sizes available as standard products within that product series. They are useful for a variety of developmental needs including circuit simulation, circuit testing, prototyping and agency evaluation. All items carry appropriate agency approvals and meet specifications listed in the catalog section referring to the product (see page notation accompanying the kit for individual product specifications). The kits are housed in an easy to see, easy to store clear polycarbonate box with a convenient snap closing hinged lid. Call your Triad representative for details.



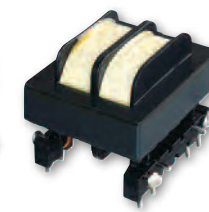
Kit CST306K

Kit CST206K

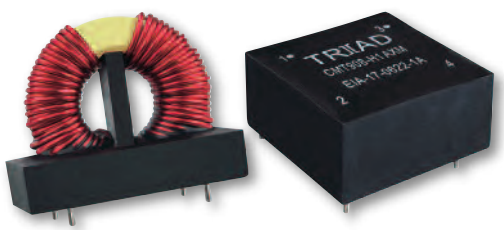
Kit GDE25K

Kit CMT-8100K

Kit FITK



Kit CME2425K



Kit CMT908K

Kit CME375K

Kit FIRCHK

Kit RCK

Kit CST206K Contains	Kit CST306K Contains	Kit GDE25K Contains	Kit CMT8100 Contains	Kit FITK Contains		Kit CME2425K Contains	Kit CMT908K Contains	Kit CME375K Contains	Kit FIRCHK Contains	Kit RCK Contains
CST206-1A	CST306-1A	GDE25-1	CMT-8101	FIT44-1	FIT80-1	CME2425-1	CMT908-V1	CME375-1	FIRCH-1	RC-1
CST206-1T	CST306-1T	GDE25-2	CMT-8102	FIT44-2	FIT80-2	CME2425-2	CMT908-V2	CME375-2	FIRCH-2	RC-2
CST206-2A	CST306-2A	GDE25-3	CMT-8103	FIT44-3	FIT80-3	CME2425-3	CMT908-V3	CME375-3	FIRCH-3	RC-3
CST206-2T	CST306-2T	GDE25-4	CMT-8104	FIT44-4	FIT80-4	CME2425-4	CMT908-V4	CME375-4	FIRCH-4	RC-4
CST206-3A	CST306-3A	GDE25-5	CMT-8105		FIT80-5	CME2425-5		CME375-5	FIRCH-5	RC-5
CST206-3T	CST306-3T	GDE25-6	CMT-8106	FIT50-1	FIT80-6	CME2425-6	CMT908-H1	CME375-6	FIRCH-6	RC-6
			CMT-8107	FIT50-2		CME2425-7	CMT908-H2	CME375-7		RC-7
			CMT-8108	FIT50-3	FIT106-1	CME2425-8	CMT908-H3	CME375-8		RC-8
			CMT-8109	FIT50-4	FIT106-2	CME2425-9	CMT908-H4	CME375-9		RC-9
			CMT-8110	FIT50-5	FIT106-3					RC-10
			CMT-8111	FIT50-6	FIT106-4					RC-11
			CMT-8112	FIT50-7	FIT106-5					
			CMT-8113		FIT106-6					
			CMT-8114	FIT68-1						
			CMT-8115	FIT68-2						
			CMT-8116	FIT68-3						
See Page 18	See Page 18	See Page 28	CMT-8117	FIT68-4	See Page 26	See Page 21	See Page 21	See Page 21	See Page 27	See Page 27
			CMT-8118	FIT68-5						
			CMT-8119	FIT68-6						
			CMT-8120	FIT68-7						
			CMT-8121							
			See Page 25							

Current Sense Transformers

High Frequency

:: CST206/306 Description

Designed for switching power supply applications, Triad current sense transformers are used to detect the current passing through a conductor.

These transformers are very reliable and operate effectively over the frequency range of 20 kHz-200 kHz. They are constructed of UL rated 130ºC materials. Both models are available with a center tap option.

Figure A

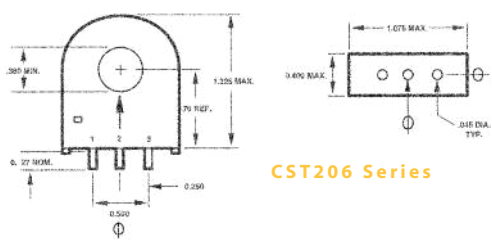
Figure B

Section/ Figure	Type No.	ET VμSEC REF 20 kHz	Tuurns Count	Min. Ind. mH	DCR Max. Ohms	Pri. Amps
A	CST206-1A	2000	100	14.0	.580	110.0 RMS
B	CST206-1T	2000	100 CT	14.0	.580	110.0 RMS
A	CST206-2A	4000	200	56.0	3.500	80.0 RMS
B	CST206-2T	4000	200 CT	56.0	3.500	80.0 RMS
A	CST206-3A	6000	300	130.0	12.400	70.0 RMS
B	CST206-3T	6000	300 CT	130.0	12.400	70.0 RMS
B	CST306-1A	500	50	3.5	.340	35.0 RMS
A	CST306-1T	500	50 CT	3.5	.340	35.0 RMS
B	CST306-2A	1000	100	14.0	1.550	25.0 RMS
A	CST306-2T	1000	100 CT	14.0	1.550	25.0 RMS
B	CST306-3A	2000	200	55.0	3.750	25.0 RMS
A	CST306-3T	2000	200 CT	55.0	3.750	25.0 RMS

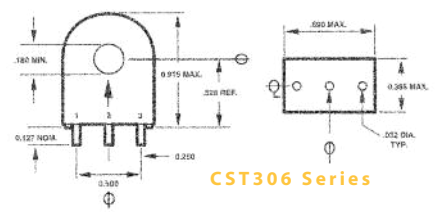
:: Outline Dimensions

Technical Notes

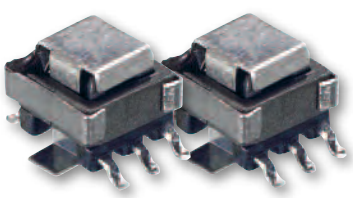
1. Derate ET product by 32% for 50 kHz - 100 kHz, 52% for 100 kHz - 200 kHz and 50% for unidirectional operation.
2. Rated primary current renders approximately 40ºC temperature rise.
3. CST206 models have maximum recommended terminating resistance of 1 ohm per turn.
4. Primary is inserted through hole in casing.
5. 3 pin or center tapped (CT) models are designed with a T suffix.



CST206 Series



CST306 Series



:: CSE5 Description

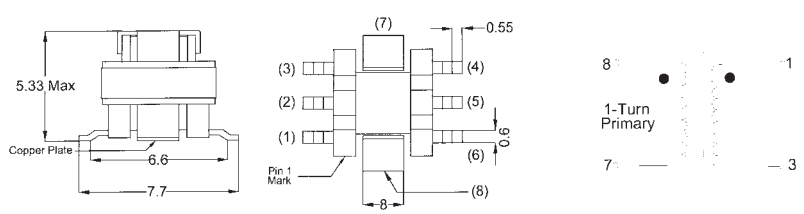
Designed to monitor current at 250 kHz and above. These transformers have a primary current rating of 10 Amps.

Part Number	Turns N1:N2 @ 10 kHz	Secondary Inductance μH Min.	Secondary DCR mΩ Max	Color Identificaton Dot	Tape
CSE5-100201	1:20	80	55	WHT	BLK
CSE5-100301	1:30	180	870	YEL	YEL
CSE5-100401	1:40	320	1140	RED	RED
CSE5-100501	1:50	500	1500	BLU	BLU
CSE5-100601	1:60	720	1750	BLU	BLK
CSE5-100701	1:70	980	4750	RED	YEL
CSE5-101001	1:100	2000	5500	YEL	RED
CSE5-101251	1:125	3000	8500	WHT	BLU

:: Outline Dimensions

Technical Notes

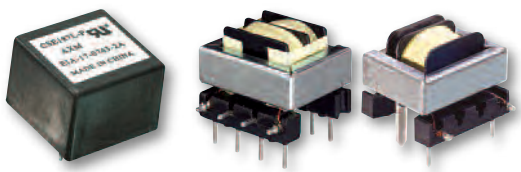
{mm}



Current Sense Transformers

Class B
UL File: E205349

Low Frequency



:: Description

Designed to monitor current in low frequency applications.

:: Specifications

Section	Part No.	V*usec ET Product (Max)	Turns Ratio	Primary DCR mΩ Max	Secondary DCR mΩ Max	Figure	Construction
A	**CSE184L**	30000	1:16.67	125	23	1	Open Frame
	CSE185L	30000	1:50	19.5	23	1	Open Frame
	CSE186L	30000	1:166	2.0	23	2	Open Frame
	***CSE187L**	30000	1:500	0.27	21	3	Open Frame
B	***CSE187L-P**	30000	1:500	0.27	21	4	Potted

** UL recognized*

:: Outline Dimensions

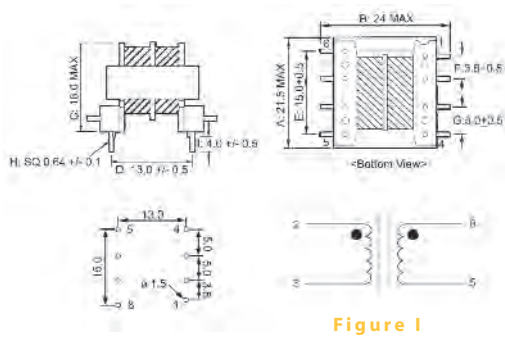


Figure 1

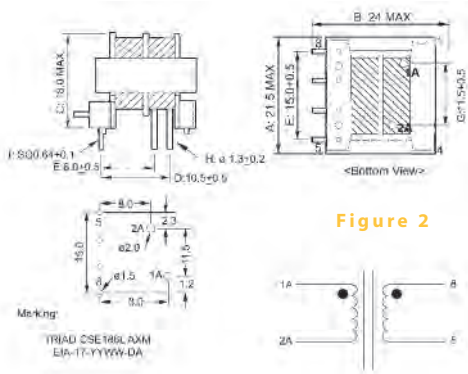


Figure 2

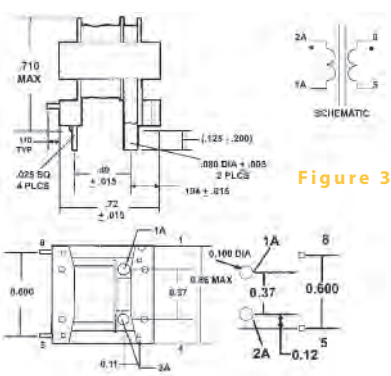


Figure 3

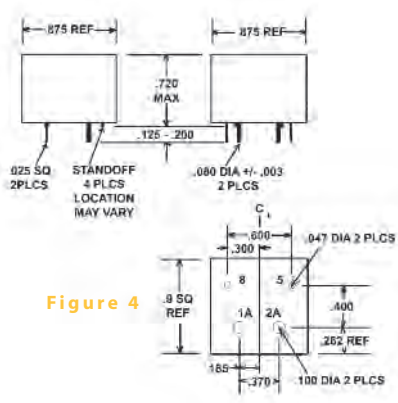


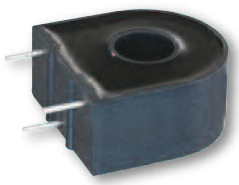
Figure 4

Technical Notes

1. Suggested burden resistor: 60 ohms.
2. Constructed with UL recognized materials (Class B, 130ºC).
3. Hi-pot: 2,500 volts wdg-wdg.
4. Potted version available with a dielectric strength of 4,000 volts wdg-wdg.

Current Sense Transformers

Low Frequency



:: CST Series Description

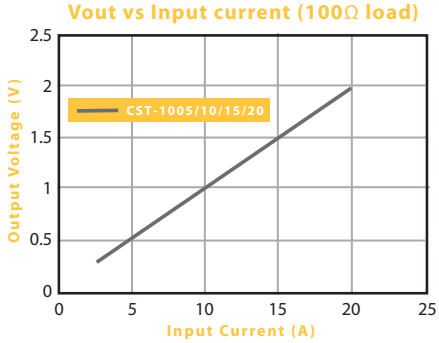
Triad current sense transformers are used to detect the current passing through a conductor. These transformers are very reliable and operate effectively between 50-60 Hz. They are constructed of UL rated 130ºC materials.

:: Specifications

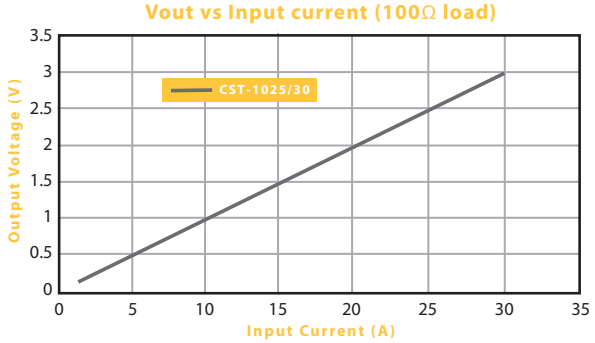
Part No.	Ip Amps	Turns Ratio	Terminating Resistor		DCR (Ohms) Nominal	Volts/Amp @ rated Ip	Net Weight (grams)	Case Dimensions – mm					
			Ohms	Watt		100	REF	A	B	C	D	E	F
CST-1005	5	1000:1	100	0.0025	40.00	0.0958	20.0	23.50	24.80	12.00	15.00	7.50	8.50
CST-1010	10	1000:1	100	0.0100	40.00	0.0969	20.0	23.50	24.80	12.00	15.00	7.50	8.50
CST-1015	15	1000:1	100	0.0230	40.00	0.0971	20.0	23.50	24.80	12.00	15.00	7.50	8.50
CST-1020	20	1000:1	100	0.0400	40.00	0.0977	20.0	23.50	24.80	12.00	15.00	7.50	8.50
CST-1025	25	1000:1	100	0.0630	46.00	0.0976	30.0	30.20	30.20	14.30	20.32	10.16	11.40
CST-1030	30	1000:1	100	0.0900	46.00	0.0977	30.0	30.20	30.20	14.30	20.32	10.16	11.40

Ip: Primary Current

Vout vs Input current (100Ω load)



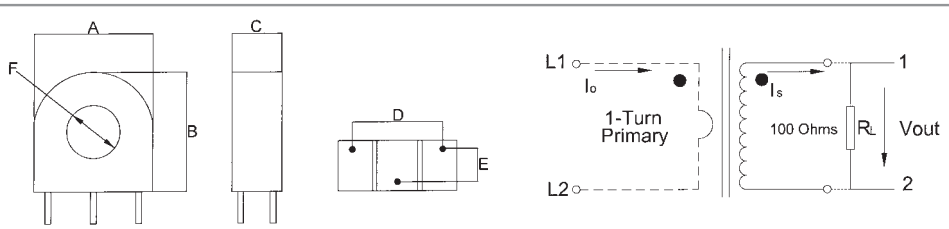
Vout vs Input current (100Ω load)



:: Outline Dimensions

Technical Notes

1. Pin length: 5 ±1mm
2. Pin diameter: 0.8 ±0.1mm
3. Pin 3 normally for mechanical support only
3. 4KV Dielectric



Common Mode Inductors

CME/CMT Series

Figure A

Figure B

Figure C

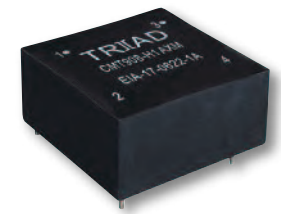


Figure D

:: Description

Highly dependable Triad common mode EMI suppression inductors are used in various types of power supplies to eliminate noise common to all lines. These units also provide effective differential mode filtering. Meeting VDE, IEC, UL, and CSA requirements, they minimize AC line transmitted interference often created by high frequency switching power supplies. Normally placed close to the input source, these compact inductors are constructed with UL rated 130ºC materials.

:: E-Core Common Mode Inductors

Section	Type No.	Figure	Inductance mH min.	Amps R.M.S.	Max. DC Resistance	Min. Leakage	Dimensions H	W	L	A	B	C	D	Wt. Lbs.
A	CME375-1	A	4.40	5.500	.049 Ohms	45.0 µH	1.18	1.26	1.50	.150	.600	.200	.036 Sq.	0.54
	CME375-2		6.90	4.400	.077 Ohms	70.0 µH								
	CME375-3		10.9	3.500	.122 Ohms	125.0 µH								
	CME375-4		17.8	2.700	.196 Ohms	180.0 µH								
	CME375-5		28.6	2.200	.316 Ohms	300.0 µH								
	CME375-6		43.6	1.750	.489 Ohms	440.0 µH								
	CME375-7		70.3	1.380	.785 Ohms	720.0 µH								
	CME375-8		111.6	1.100	1.240 Ohms	1.1 mH								
	CME375-9		176.1	.870	1.980 Ohms	1.8 mH								
B	CME2425-1	B	1.05	2.50	.050 Ohms	9.0 µH	1.075	1.050	1.050	.125	.800	.610	.029 Sq.	.154
	CME2425-2		2.37	2.00	.080 Ohms	14.0 µH								
	CME2425-3		3.8	1.60	.127 Ohms	25.0 µH								
	CME2425-4		6.0	1.28	.202 Ohms	36.0 µH								
	CME2425-5		9.8	1.00	.319 Ohms	60.0 µH								
	CME2425-6		16.0	0.80	.500 Ohms	90.0 µH								
	CME2425-7		27.7	0.63	.820 Ohms	144.0 µH								
	CME2425-8		40.5	0.50	1.260 Ohms	240.0 µH								
	CME2425-9		67.5	0.40	2.020 Ohms	360.0 µH								

A CME375-KIT is available which includes each one of the components in section A.
A CME2425-KIT is available which includs each one of the components in section B.

:: Encapsulated Toroidal Inductors

Section	Type No.	Figure	Min. Inductance	Amps R.M.S.	Max. DC Resistance	Min. Leakage	Dimensions H	W	L	A	B	Wt. Lbs.
C	CMT908-V1	C	2.00 mH	7.50	.020 Ohms	25.0 µH	1.50	.800	1.45	.9	.6	.08
	CMT908-V2		4.00 mH	5.20	.040 Ohms	45.0 uH						
	CMT908-V3		8.00 mH	3.20	.120 Ohms	90.0 µH						
	CMT908-V4		16.00mH	2.60	.160 Ohms	180.0 µH						
D	CMT908-H1	D	2.00 mH	7.50	.020 Ohms	25.0 µH	.80	1.5	1.5	1.08	1.28	.120
	CMT908-H2		4.00 mH	5.20	.040 Ohms	45.0 uH						
	CMT908-H3		8.00 mH	3.20	.120 Ohms	90.0 µH						
	CMT908-H4		16.00 mH	2.60	.160 Ohms	180.0 µH						

A CMT908-KIT is available which includes one of each of the above listed components.

:: Outline Dimensions

Technical Notes

1. Hi-pot tested at 2,500 VRMS.
2. DC resistance at 20ºC ±10%.
3. Inductances are minimum measured at 10 Gauss.
4. Current ratings for approximately 40ºC temperature rise.

Figure A

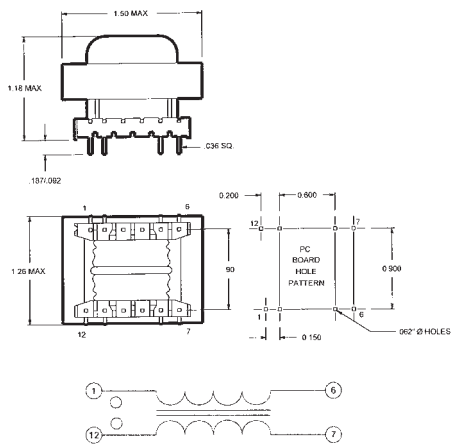


Figure B

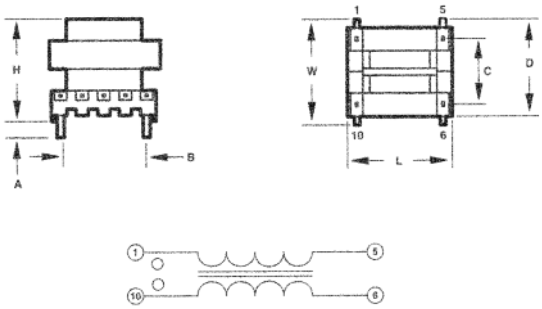


Figure C

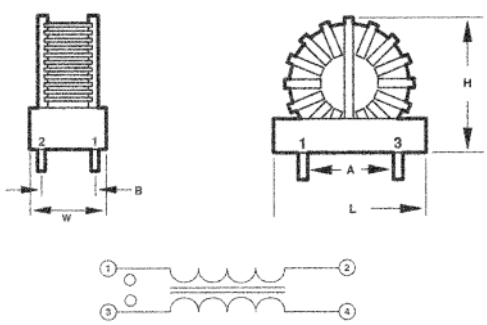
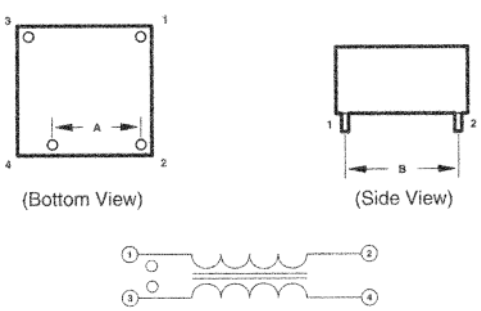


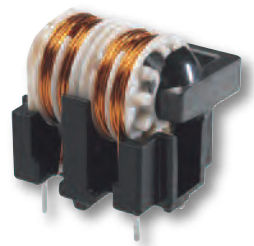
Figure D



Triad Magnetics is in the business to provide our customers with the best solutions for their magnetics needs.

Common Mode Inductors

UT/ET Series



:: Description

Common-mode choke coils are useful in a wide range of applications for the prevention of electromagnetic interference (EMI) and radio frequency interference (RFI) from power supply lines and for prevention of malfunctioning of various electronic equipment. Features include low leakage flux, high self-resonant frequency, high impedance at applicable frequency and low stray capacitance in section winding.

:: Specifications

Rated Voltage: 250 VAC
Temperature Rise: 45ºC maximum
Insulation Resistance: 100 M Ω minimum
Operating Temperature Range: -20 to 105ºC
Accord with Safety Standard: UL, CSA, IEC
Dielectric Withstanding Voltage: 2,000 VAC

:: Vertical Configuration

Section	Figure	Part No.	Inductance (mH) Min.	Inductance Difference (µH) Max.	DCR Max. (Ω)	Rated Current (A)	Dimension WxLxH (mm)	Pin Mounting AxB (mm)	Weight Oz.
A	A	UT2024-006	9.00	300	1.40	0.50	23x18.5x23.5	13.0x10.0	.52
	A	UT2024-007	4.50	250	0.75	0.60	23x18.5x23.5	13.0x10.0	.52
	A	UT2024-008	2.50	200	0.40	0.70	23x18.5x23.5	13.0x10.0	.52
	A	UT2024-009	1.10	150	0.25	0.90	23x18.5x23.5	13.0x10.0	.52
	A	UT2024-010	0.45	100	0.13	1.00	23x18.5x23.5	13.0x10.0	.52
B	B	ET2432-018	36.00	400	2.70	0.50	26.5x19.5x31	13.0x10.0	.88
	B	ET2432-019	24.00	350	1.60	0.60	26.5x19.5x31	13.0x10.0	.88
	B	ET2432-020	9.20	300	0.75	0.70	26.5x19.5x31	13.0x10.0	.88
	B	ET2432-021	7.80	250	0.50	0.90	26.5x19.5x31	13.0x10.0	.88
	B	ET2432-022	5.20	200	0.34	1.00	26.5x19.5x31	13.0x10.0	.88
	B	ET2432-023	3.60	150	0.25	1.50	26.5x19.5x31	13.0x10.0	.88
	B	ET2432-024	3.20	100	0.20	2.00	26.5x19.5x31	13.0x10.0	.88
C	B	ET2835-034	120.00	2,500	2.60	0.50	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-035	92.00	2,000	2.00	0.60	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-036	66.00	1,500	1.50	0.70	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-037	36.00	1,000	0.80	0.90	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-038	25.00	500	0.60	1.00	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-039	15.50	350	0.32	1.50	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-040	10.00	200	0.25	2.00	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-041	8.00	150	0.19	2.50	31.5x23.5x37	13.0x10.0	1.40
	B	ET2835-042	5.00	100	0.10	3.00	31.5x23.5x37	13.0x10.0	1.40
D	B	ET3542-051	33.00	1,000	0.50	1.50	38x26x45	21.0x15.0	2.60
	B	ET3542-052	22.00	700	0.40	1.80	38x26x45	21.0x15.0	2.60
	B	ET3542-053	18.00	500	0.30	2.00	38x26x45	21.0x15.0	2.60
	B	ET3542-054	12.00	350	0.20	2.50	38x26x45	21.0x15.0	2.60
	B	ET3542-055	10.00	300	0.15	2.70	38x26x45	21.0x15.0	2.60
	B	ET3542-056	8.10	250	0.12	3.00	38x26x45	21.0x15.0	2.60
	B	ET3542-057	6.00	200	0.10	3.50	38x26x45	21.0x15.0	2.60
	B	ET3542-058	4.70	150	0.08	4.00	38x26x45	21.0x15.0	2.60

:: Horizontal Configuration

Section	Figure	Part No.	Inductance (mH) Min.	Inductance Difference (uH) Max.	DCR Max. (Ω)	Rated Current (A)	Dimension WxLxH (mm)	Pin Mounting AxB (mm)	Weight Oz.
	C	**UT2020-001**	9.00	300	1.40	0.50	24.5x23x20	13.0x10.0	.52
	C	**UT2020-002**	4.50	250	0.75	0.60	24.5x23x20	13.0x10.0	.52
A	C	**UT2020-003**	2.50	200	0.40	0.70	24.5x23x20	13.0x10.0	.52
	C	**UT2020-004**	1.10	150	0.25	0.90	24.5x23x20	13.0x10.0	.52
	C	**UT2020-005**	0.45	100	0.13	1.00	24.5x23x20	13.0x10.0	.52
	D	**ET2424-011**	36.00	400	2.70	0.50	26.5x26.5x23	21.0x15.0	.88
	D	**ET2424-012**	24.00	350	1.60	0.60	26.5x26.5x23	21.0x15.0	.88
	D	**ET2424-013**	9.20	300	0.75	0.70	26.5x26.5x23	21.0x15.0	.88
B	D	**ET2424-014**	7.80	250	0.50	0.90	26.5x26.5x23	21.0x15.0	.88
	D	**ET2424-015**	5.20	200	0.34	1.00	26.5x26.5x23	21.0x15.0	.88
	D	**ET2424-016**	3.60	150	0.25	1.50	26.5x26.5x23	21.0x15.0	.88
	D	**ET2424-017**	3.20	100	0.20	2.00	26.5x26.5x23	21.0x15.0	.88
	D	**ET2825-025**	120.00	2,500	2.60	0.50	30x30x25	24.0x20.0	1.40
	D	**ET2825-026**	92.00	2,000	2.00	0.60	30x30x25	24.0x20.0	1.40
	D	**ET2825-027**	66.00	1,500	1.50	0.70	30x30x25	24.0x20.0	1.40
	D	**ET2825-028**	36.00	1,000	0.80	0.90	30x30x25	24.0x20.0	1.40
C	D	**ET2825-029**	25.00	500	0.60	1.00	30x30x25	24.0x20.0	1.40
	D	**ET2825-030**	15.50	350	0.32	1.50	30x30x25	24.0x20.0	1.40
	D	**ET2825-031**	10.00	200	0.25	2.00	30x30x25	24.0x20.0	1.40
	D	**ET2825-032**	8.00	150	0.19	2.50	30x30x25	24.0x20.0	1.40
	D	**ET2825-033**	5.00	1.00	0.10	3.00	30x30x25	24.0x20.0	1.40

:: Outline Dimensions

Technical Notes

1. The inductance difference measures between the coil L1 and L2.

Figure A

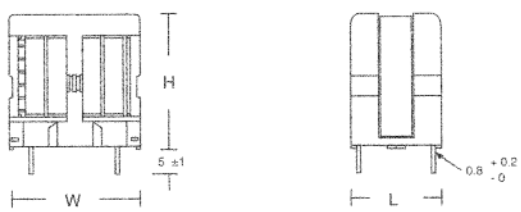


Figure B

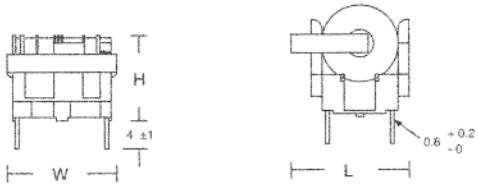


Figure C

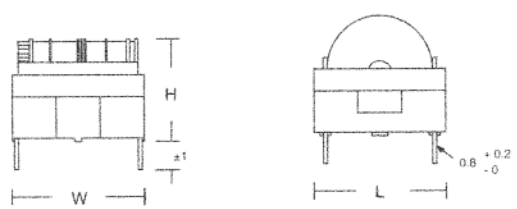
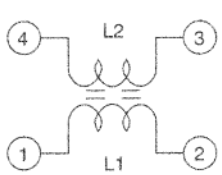
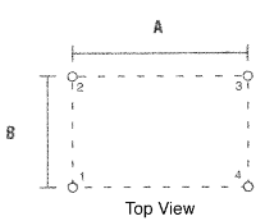


Figure D



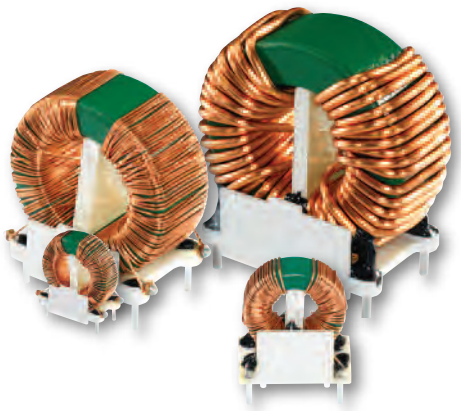
Connection



Pin Mounting

Common Mode Inductors

CMT8100 Series



:: Description

Highly dependable Triad common mode EMI suppression inductors are used in various types of power supplies to eliminate noise common to all lines. These units also provide effective differential mode filtering. Meeting VDE, IEC, UL and CSA requirements, they minimize AC line transmitted interference often created by high frequency switching power supplies.

:: Specifications

Inductance Range From: 1.0 to 50 mH
Current Rating From: 1.7 to 20 ARMS
Dielectric Strength: 1500 VRMS
Operating Temperature: -55 to 105°C

:: CMT8100 Series

Section	Part Number	Figure	L (mH) min. @ 1 KHz	I(A) max.	DCR (?) max.	Dimensions A Max.	B ±0.01	C ±0.015	D ±0.015	E Max.	F Max.	G Min.
A	CMT-8101	1	4.0	1.7	0.173	0.76	0.425	0.600	0.250	0.90	0.040	0.15
	CMT-8102	1	2.5	2.4	0.09	0.76	0.425	0.600	0.250	0.90	0.040	0.15
	CMT-8103	1	1.0	4.8	0.022	0.76	0.425	0.600	0.250	0.90	0.040	0.15
	CMT-8104	2	10.0	2.4	0.17	1.20	0.60	0.800	0.400	1.20	0.050	0.15
	CMT-8105	2	7.0	2.8	0.12	1.20	0.60	0.800	0.400	1.20	0.050	0.15
	CMT-8106	2	5.0	3.7	0.07	1.20	0.60	0.800	0.400	1.20	0.050	0.15
	CMT-8107	2	2.0	6.6	0.022	1.20	0.60	0.800	0.400	1.20	0.050	0.15
	CMT-8108	2	1.0	10.0	0.01	1.20	0.60	0.800	0.400	1.20	0.050	0.15
	CMT-8109	2	30.0	2.3	0.33	1.35	0.80	0.900	0.600	1.45	0.050	0.15
	CMT-8110	2	20.0	2.9	0.21	1.35	0.80	0.900	0.600	1.45	0.050	0.15
	CMT-8111	2	12.0	4.0	0.11	1.35	0.80	0.900	0.600	1.45	0.050	0.15
	CMT-8112	2	8.0	5.6	0.055	1.35	0.80	0.900	0.600	1.45	0.050	0.15
	CMT-8113	2	5.0	8.9	0.022	1.45	0.80	0.900	0.600	1.50	0.050	0.15
	CMT-8114	2	2.5	12.5	0.011	1.45	0.80	0.900	0.600	1.50	0.053	0.15
	CMT-8115	2	1.2	16.0	0.006	1.50	0.80	0.900	0.600	1.53	0.060	0.15
	CMT-8116	2	50.0	2.3	0.45	1.55	0.80	0.900	0.600	1.65	0.050	0.15
	CMT-8117	2	36.0	2.9	0.30	1.55	0.80	0.900	0.600	1.65	0.050	0.15
	CMT-8118	2	7.3	9.3	0.032	1.65	0.80	0.900	0.600	1.65	0.043	0.15
	CMT-8119	2	4.0	14.5	0.012	1.70	0.90	1.200	0.700	1.65	0.060	0.15
	CMT-8120	2	2.4	17.0	0.008	1.70	0.90	1.200	0.700	1.65	0.067	0.15
	CMT-8121	2	1.0	20.0	0.007	1.70	0.90	1.200	0.700	1.65	0.067	0.15

:: Outline Dimensions

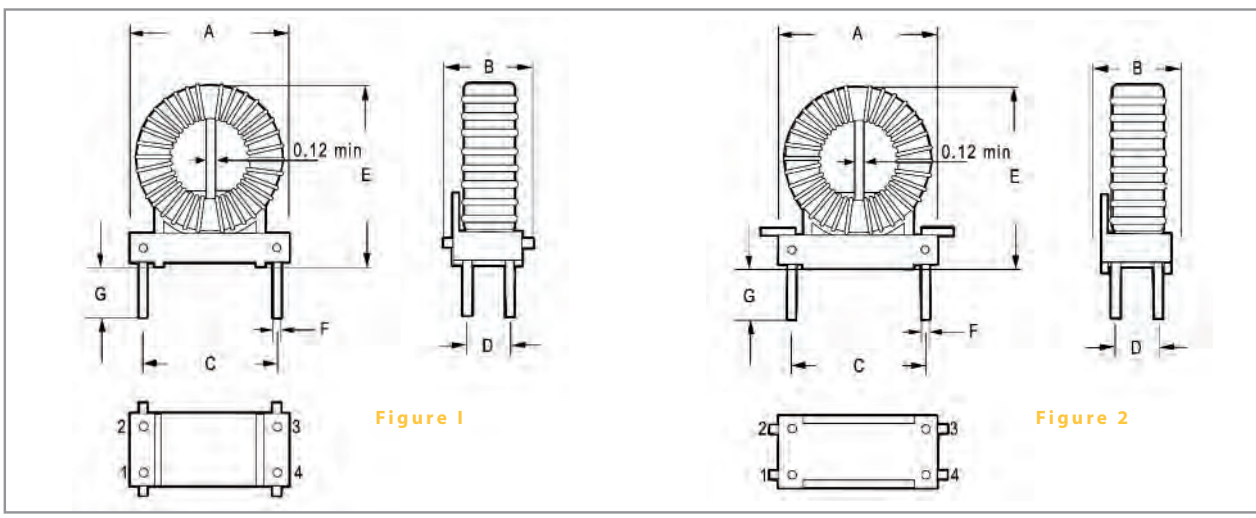


Figure 1

Figure 2

Differential Mode Inductors

Switchmode/High Frequency

:: Description

Triad toroidal inductors are specifically designed to minimize transients. These devices store energy, and therefore, condition the output signal by leveling out the current waveform providing a more stable current supply. Generally used in high frequency circuits, our standardized design provides an economical solution in differential mode applications or as an output inductor.

::Torodial Inductors

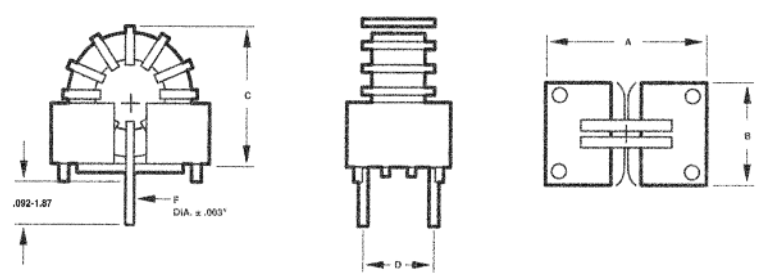
Section	Type No.	Min. Inductance (µH) No Bias	Min. Inductance (µH) At Bias	Rated DCAmps	Max. DCR (mOhm)	Dimensions A	B	C	D	E	Wt. Lbs.
A	FIT44-1	18.85	12.72	2.8	44.8	0.625	0.350	0.700	0.250	0.020	.008
	FIT44-2	14.75	9.82	3.4	30.7					0.022	
	FIT44-3	12.30	7.75	4.0	23.4					0.025	
	FIT44-4	8.06	5.22	4.8	15.9					0.028	
B	FIT50-1	47.40	29.00	2.8	78.9	0.700	0.475	0.750	0.300	0.020	.012
	FIT50-2	35.48	23.77	3.4	57.8					0.022	
	FIT50-3	27.16	16.13	4.0	40.1					0.025	
	FIT50-4	21.65	12.27	4.8	29.2					0.028	
	FIT50-5	16.76	9.50	5.7	20.0					0.032	
	FIT50-6	12.50	6.75	6.8	14.0					0.036	
	FIT50-7	8.87	4.80	8.1	11.0					0.040	
C	FIT68-1	89.50	57.99	2.8	108.0	0.875	0.475	0.950	0.300	0.020	.026
	FIT68-2	71.10	41.59	3.4	86.1					0.023	
	FIT68-3	54.81	33.05	4.0	59.9					0.026	
	FIT68-4	43.30	26.63	4.8	42.4					0.028	
	FIT68-5	33.16	18.79	5.7	28.8					0.032	
	FIT68-6	24.31	13.56	6.8	20.2					0.036	
	FIT68-7	18.65	10.23	8.1	14.8					0.040	
D	FIT80-1	128.00	74.04	4.0	95.2	0.975	0.625	1.100	0.450	0.026	.045
	FIT80-2	107.50	58.05	4.8	67.9					0.029	
	FIT80-3	80.75	42.00	5.7	44.8					0.032	
	FIT80-4	65.04	31.60	6.8	32.8					0.036	
	FIT80-5	47.80	22.79	8.1	22.5					0.040	
	FIT80-6	38.70	18.11	9.7	17.0					0.045	
E	FIT106-1	253.00	153.00	4.0	139.0	1.300	0.725	1.400	0.500	0.026	.090
	FIT106-2	197.00	113.00	4.8	106.0					0.029	
	FIT106-3	154.00	84.00	5.7	74.0					0.032	
	FIT106-4	116.00	61.90	6.8	48.5					0.036	
	FIT106-5	94.50	48.00	8.1	39.1					0.040	
	FIT106-6	70.05	35.30	9.7	24.0					0.045	

A FIT-KIT is available which includes one of each of the above listed components.

:: Outline Dimensions

Technical Notes

1. Nominal inductance values are typically 10% higher than minimal rating.
2. Biased inductance measured at rated DC amps.
3. Operation at rated current yields approximately 40ºC temperature rise over 20ºC ambient.



Rod Core Inductors

Switchmode/High Frequency

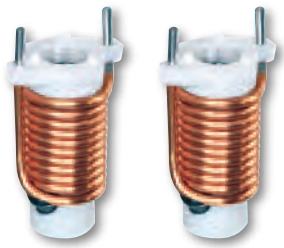


Figure A

Figure B

:: Description

Triad high current rod core inductors provide cost effective energy storage. By conditioning the output signal, the inductor smoothes out the current waveform to provide a more stable current. These low cost inductors are designed to be compatible with automated P.C.B. installation.

Operating frequency: 20 kHz - 200 kHz

:: High Current Rod Core Inductors

Section	Type No.	Color Code	Figure	±15% DC Rated Inductance µH	Max. Current	DC Resistance (mOhms)	Lead Diameter	Wt. Lbs.
A	FIRCH-1	Red Dot	A	2.54	11.60A	5.50	.050"	.03
	FIRCH-2	Yellow Dot		3.05	9.70A	7.30	.045"	
	FIRCH-3	Orange Dot		3.60	8.10A	9.95	.040"	
	FIRCH-4	Green Dot		5.00	6.80A	14.10	.036"	
	FIRCH-5	Black Dot		5.90	5.70A	18.50	.032"	
	FIRCH-6	Brown Dot		7.22	4.80A	26.10	.028"	

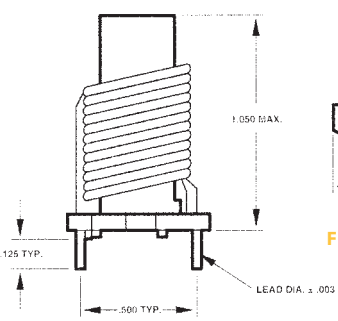
A FIRCH-KIT is available which includes one of each of the above listed components.

:: Rod Core Inductors

Section	Type No.	Figure	10% Inductance	DC Rated Current	±15% DC Resistance Ohms	Dimensions H	L	A	B	Wt. Lbs.
B	RC-1	B	5.6 mH	.250A	6.100	.93	.600	.150	.375	.03
	RC-2		3.9 mH	.320A	3.900					
	RC-3		2.5 mH	.400A	2.450					
	RC-4		1.5 mH	.500A	1.530					
	RC-5		915.0 µH	.625A	1.000					
	RC-6		560.0 µH	.800A	.600					
	RC-7		450.0 µH	1.000A	.420					
	RC-8		250.0 µH	1.250A	.210					
	RC-9		200.0 µH	1.600A	.180					
	RC-10		100.0 µH	2.000A	.098					
	RC-11		75.0 µH	2.500A	.070					

A RC-KIT is available which includes one of each of the above listed components.

:: Outline Dimensions



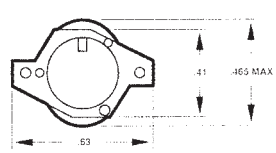
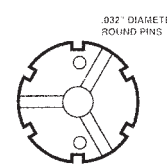


Figure A



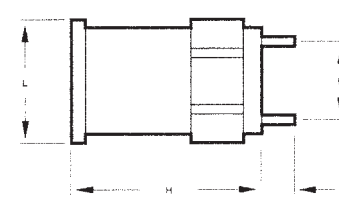


Figure B

Technical Notes

Figure A
1. Rated current 40ºC temperature rise.

Figure B
1. Rated current 10 amps per pin maximum.
2. Rated current renders approximately 40ºC temperature rise.

Gate Drive Transformers

Switchmode/High Frequency

:: Description

Triad gate drive transformers are used universally in all high frequency switching topologies to isolate the control circuitry from the line-connected switches. The windings are interleaved for the lowest possible practical leakage inductance. Turn ratios of 1:1 and 1:1.5 optimize coupling and enhance performance. Available with single or dual secondaries, these transformers constructed of UL rated 130ºC materials are easily standardized at operating frequencies 200 kHz and beyond.

:: Gate Drive Transformers

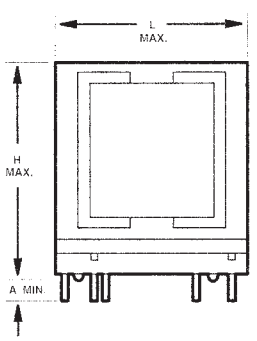
Section	Type No.	Max. DCR 1-2	Max. DCR Gate	Min. ET Product	Max. Leakage	Min. Inductance	Turns Ratio	Dimensions H	W	L	A	B	C	D	E	Wt. Oz.
A	GDE25-1	.350 Ohms	.350 Ohms	540 VµSec	2.5 µH	.680 mH	1:1	1.20	1.04	1.10	.150	.700	.600	.450	.850	.045
	GDE25-2	.350 Ohms	.650 Ohms	540 VµSec	2.5 µH	.680 mH	1:1:1									
	GDE25-3	.875 Ohms	.350 Ohms	840 VµSec	3.5 µH	1.50 mH	1.5:1									
	GDE25-4	.875 Ohms	.650 Ohms	840 VµSec	3.5 µH	1.50 mH	1.5:1:1									
	GDE25-5	.350 Ohms	.875 Ohms	540 VµSec	3.5 µH	.680 mH	1:1.5									
	GDE25-6	.350 Ohms	1.75 Ohms	540 VµSec	3.5 µH	.680 mH	1:1.5:1.5									

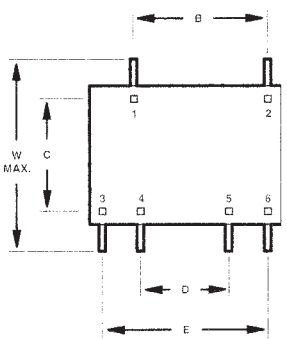
A GDE25 KIT is available which includes one of each of the above listed components.

:: Outline Dimensions

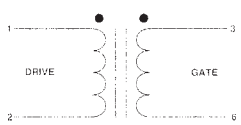
Technical Notes

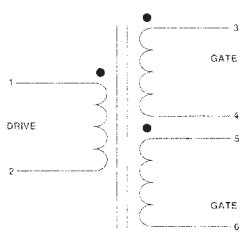
1. Drive to gate winding hi-pot tested at 3,750 VRMS.
2. Derate ET product by 32% for 50 kHz, 50% for 100 kHz and 50% for unidirectional operation.
3. Operation at rated current per winding renders approximately 40ºC temperature rise.





bottom view

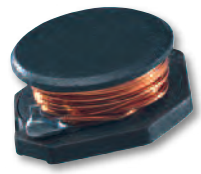




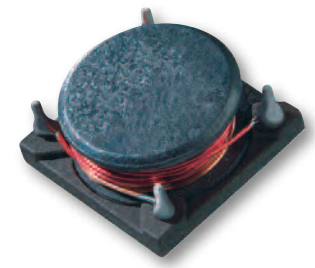
SMD Power Inductors

AX97 Series SMD Power Inductors


AX97-10XXX


AX97-20XXX


AX97-30XXX


AX97-40XXX

:: Description

Slim type
Low resistance
Excellent DC current characteristics

:: Applications

Laptop and notebook computers and PDAs
DC/DC converters
Portable communication equipment
Inductor for general purpose use

:: AX97B Series SMD Power Shielded Inductors

Part No.	A	B	C	D	E	F	Figure
AX97-10XXX	0.295 7.30	0.188 4.78	0.127 3.23	0.218 5.54	0.059 1.50	0.100 2.54	1
AX97-20XXX	0.530 13.46	0.370 9.40	0.137 3.50	0.404 10.26	0.120 3.05	0.135 3.43	1
AX97-30XXX	0.530 13.46	0.370 9.40	0.232 5.90	0.404 10.26	0.120 3.05	0.135 3.43	1
AX97-40XXX	0.634 16.10	0.622 15.80	0.284 7.21	0.520 13.21	0.157 4.00	0.157 4.00	2

:: Outline Dimensions

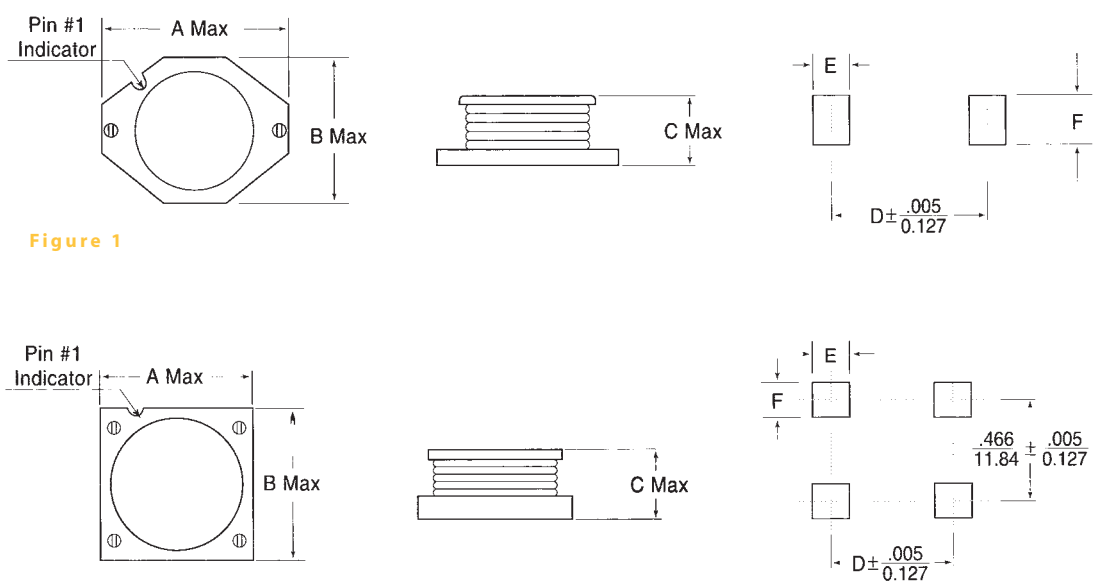


Figure 1

Figure 2

:: AX97 Series SMD Power Inductors

Part Number	Inductance (µH±20%)(1)	DC Resistance @ 25 Ω Max(3)	Rated Current (Amp)(2)	Figure
AX97-101R0	1.0	0.030	2.90	1
AX97-101R5	1.5	0.050	2.80	1
AX97-102R2	2.2	0.060	2.40	1
AX97-103R3	3.3	0.090	2.00	1
AX97-104R7	4.7	0.120	1.50	1
AX97-106R8	6.8	0.170	1.30	1
AX97-10100	10.0	0.220	1.00	1
AX97-10150	15.0	0.300	0.80	1
AX97-10220	22.0	0.430	0.70	1
AX97-10330	33.0	0.690	0.57	1
AX97-10470	47.0	0.920	0.46	1
AX97-10680	68.0	1.390	0.37	1
AX97-10101	100.0	1.980	0.28	1
AX97-10151	150.0	3.080	0.22	1
AX97-10221	220.0	4.470	0.18	1
AX97-10331	330.0	6.900	0.15	1
AX97-10471	470.0	11.550	0.12	1
AX97-20100	10.0	0.070	2.00	1
AX97-20150	15.0	0.090	1.50	1
AX97-20220	22.0	0.150	1.30	1
AX97-20330	33.0	0.210	1.10	1
AX97-20470	47.0	0.310	0.80	1
AX97-20680	68.0	0.420	0.70	1
AX97-20101	100.0	0.580	0.60	1
AX97-20151	150.0	0.890	0.50	1
AX97-20221	220.0	1.300	0.40	1
AX97-20331	330.0	2.000	0.30	1
AX97-20471	470.0	2.500	0.20	1
AX97-20681	680.0	3.500	0.10	1
AX97-20102	1000.0	6.000	0.05	1
AX97-301R0	1.0	0.010	8.50	1
AX97-301R5	1.5	0.010	7.90	1
AX97-302R2	2.2	0.020	7.40	1
AX97-303R3	3.3	0.020	6.60	1

Part Number	Inductance (µH±20%)(1)	DC Resistance @ 25 Ω Max(3)	Rated Current (Amp)(2)	Figure
AX97-304R7	4.7	0.020	6.00	1
AX97-306R8	6.8	0.030	5.20	1
AX97-308R2	8.2	0.030	5.00	1
AX97-30100	10.0	0.040	4.60	1
AX97-30150	15.0	0.050	3.70	1
AX97-30220	22.0	0.070	3.10	1
AX97-30330	33.0	0.110	2.50	1
AX97-30470	47.0	0.160	2.00	1
AX97-30680	68.0	0.200	1.80	1
AX97-30820	82.0	0.240	1.58	1
AX97-30101	100.00	0.3000	1.50	1
AX97-30151	150.00	0.4400	1.20	1
AX97-30221	220.00	0.6400	1.00	1
AX97-30331	330.00	1.0000	0.80	1
AX97-30471	470.00	1.5000	0.50	1
AX97-30681	680.00	2.2000	0.40	1
AX97-30102	1000.00	3.1500	0.30	1
AX97-403R3	3.30	0.0100	9.80	2
AX97-404R7	4.70	0.0100	9.30	2
AX97-406R8	6.80	0.0200	7.70	2
AX97-408R2	8.20	0.0200	7.00	2
AX97-40100	10.00	0.0200	6.50	2
AX97-40150	15.00	0.0300	5.30	2
AX97-40220	22.00	0.0400	4.40	2
AX97-40330	33.00	0.0600	3.50	2
AX97-40470	47.00	0.0700	3.00	2
AX97-40680	68.00	0.1100	2.50	2
AX97-40820	82.00	0.1200	2.20	2
AX97-40101	100.00	0.1500	2.00	2
AX97-40151	150.00	0.2200	1.70	2
AX97-40221	220.00	0.3300	1.30	2
AX97-40331	330.00	0.4500	1.10	2
AX97-40471	470.00	0.7000	0.93	2
AX97-40681	680.00	1.0000	0.78	2

Notes: 1. Inductance measured at 100.0KHz, 0.1Vrms, without DC current.
2. Rated DC current is the approximate current at which inductance will be decreased by 10% from its initial (zero DC) value or the DC current at which ∅T=40°, whichever is lower.
3. For AX97-40 Series, resistance measured with both windings conducted in parallel.

SMD Power Inductors

AX104R Series SMD Power Shield Inductors

:: Description

Slim type
Self shielded
Height: 4.0mm maximum
Low resistance
Excellent DC current characteristics

:: Applications

Laptop and notebook computers and PDAs
DC/DC converters
Portable communication equipment
Inductor for general purpose use

:: AX104R Series SMD Power Shielded Inductors

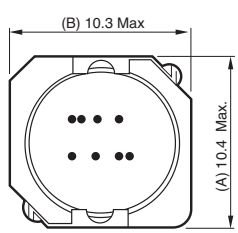
Model	Inductance(1) µH	Rated DC(2) Current Amps	DC resistance(3) Ω Max
AX104R-1R5	1.5	6.5	8.1m
AX104R-2R5	2.5	6.1	10m
AX104R-4R7	4.7	6.0	13m
AX104R-6R8	6.8	4.8	19.5m
AX104R-8R2	8.2	4.6	25m
AX104R-100	10.0	4.4	35m
AX104R-150	15.0	3.6	50m
AX104R-220	22.0	2.9	73m

Model	Inductance(1) µH	Rated DC(2) Current Amps	DC resistance(3) Ω Max
AX104R-330	33.0	2.30	93m
AX104R-470	47.0	2.10	128m
AX104R-680	68.0	1.50	213m
AX104R-101	100.0	1.35	304m
AX104R-151	150.0	1.15	506m
AX104R-221	220.0	0.92	756m
AX104R-331	330.0	0.70	1.09

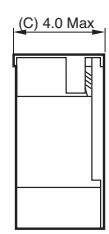
Notes: 1. Inductance measured at 100 kHz 1.0 V without DC current. Tolerance: ±30% (N).
2. Rated current is the approximate current at which inductance will be decreased by 35% from its initial (zero DC) value.
3. DC Resistance measured at 20°C.

:: Outline Dimensions

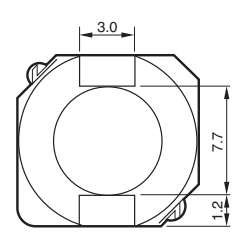
Technical Notes
[mm]



Top View



SideView



BottomView

Land Patterns

SMD Power Inductors

AX02 Series SMD Power Shielded Inductors

:: Description

Slim type
Self shielded
Height: 6.5mm maximum
Low resistance
Excellent DC current characteristics

:: Applications

Laptop and notebook computers and PDAs
DC/DC converters
Inductor for general purpose use

:: AX02-30 Series SMD Power Shielded Inductors

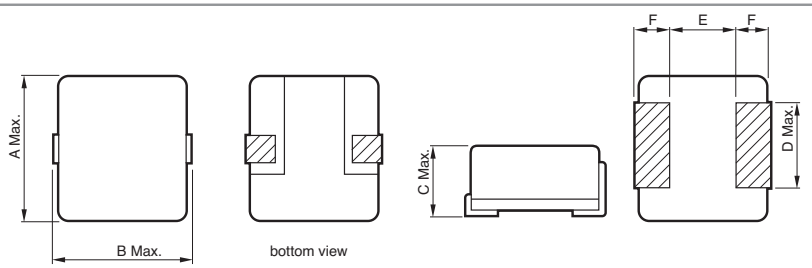
Model	Inductance(1) µH ±20%	Rated DC(2) Current Amps	The saturation(3) DC Current Amps	DC Resistance(4) mΩ Max
AX02-300R6	0.6	27.0	40.0	1.25
AX02-301R0	1.0	23.0	34.0	1.70
AX02-301R5	1.5	18.0	30.0	2.30
AX02-302R2	2.2	12.0	24.0	5.10
AX02-303R9	3.9	10.0	18.0	7.20
AX02-304R6	4.6	9.0	14.0	8.30
AX02-306R4	6.4	6.5	16.0	9.60

Notes: 1. Inductance measured at 100 kHz 1.0 V without DC current.
2. Rated current is the approximate current at which inductance will be decreased by 15% from its initial (zero DC) value.
3. The saturation DC current at which inductance rolls off approximately 30% from its initial value.
4. DC Resistance measured at 20°C.

:: Outline Dimensions

Technical Notes
A = .523 [13.3]
B = .590 [15.0]
C = .236 [6.50]
D = .295 [7.50]
E = .236 [6.00]
F = .177 [4.50]

Inches [mm]



AX1005-102K SMD Power Shielded Inductors

:: Description

Slim type; Height: 6mm maximum; Low resistance; Excellent DC current characteristics

:: Specifications

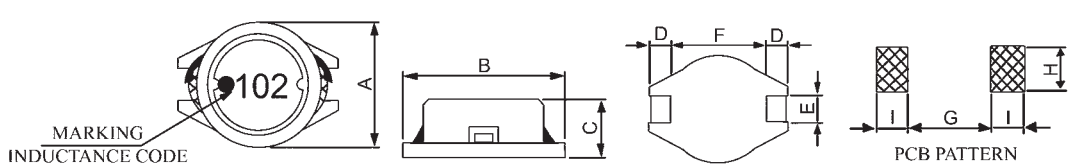
Part Number	Inductance µH±10% (1)	Q REF	SRF (MHz) Type	DC Resistance Ω Max	Rated Current Amp(2)
AX1005-102K	1000	70	2	3.2	0.22

Notes: 1. Inductance measured at 1V, 100.0KHz without DC current.
2.Rated DC current is the approximate current at which inductance will be decreased by 10% from its initial (zero DC) value or the DC current at which ΔT=40°C,whichever is lower.

:: Outline Dimensions

Technical Notes
A = .523 [13.3]
B = .590 [15.0]
C = .236 [6.50]
D = .295 [7.50]
E = .236 [6.00]
F = .177 [4.50]

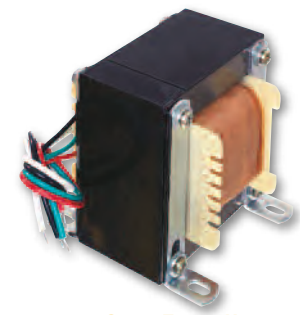
Inches [mm]



Chokes

Low Frequency

Case Type X



Case Type U

:: Description

Triad chokes are manufactured in a wide variety of inductance values and physical configurations. Smoothing chokes are power supply filter chokes having a core with an air gap which prevents saturation at maximum direct current.

:: Specifications

Inductance Ranges: .005 to 15 H
DC Current Ranges: 0.010 to 22.5 A
Resistance Ranges: .06 to 3,500 Ohms

:: Smoothing Filter Chokes

Section	Type No.	Current DC A	Inductance†† Henries	Resistance Ohms	Case Type	Connections	lead Holes Used	Dimensions H	W	D	Mounting Dimensions MW	MD	Wt. Lbs.
A	C-85X	0.010	1.500	70.00	X (1)	Leads	•	1¼	2⅛	1⅛	1¾	•	0.40
	C-1X	0.020	15.000	1,000.00	X (1)	Leads	•	1 1/16	2 1/16	1¼	1¾	•	0.21
	C-3X	0.050	10.000	500.00	X (1)	Leads	•	1⅜	2 13/16	1½	2⅜	•	0.60
B	C-8X	0.057	7.000	240.00	X (1)	Leads	•	1 15/16	3 5/16	1¾	2 13/16	•	1.00
	C-7X	0.090	10.000	270.00	X (1)	Leads	•	1 15/16	3 5/16	2	2 13/16	•	1.30
C	C-14X	0.200	6.000	150.00	X (1)	Leads	•	2 19/32	4	2¼	3 9/16	•	2.30
	C-24X	0.240	1.000	50.00	X (1)	Leads	•	1⅜	2 13/16	1½	2⅜	•	0.75
D	C-36X	0.300	0.500	30.00	X (1)	Leads	•	1⅜	2⅜	1½	2	•	0.50
E	C-17X	0.300	1.500	40.00	X (1)	Leads	•	2 9/32	3 11/16	2	3⅛	•	1.60
F	C-40X	0.600	0.320	10.00	X (1)	Leads	•	1 15/16	3 5/16	2	2 13/16	•	1.30
	C-47U	1.0/2.0	0.3/0.075§	3.0/0.75	U (2)	Leads	•	3½	2⅞	3 3/16	2¼	2 11/16	4.60
	C-56U	2.0	0.0350	0.79	U (2)	Lugs	•	2¼	2⅜	2	2 5/16	1¾	2.00
G	C-49U	5.0/10.0	0.032/0.008§	0.19/0.05	U (2)	Leads	•	4¼	3½	3⅜	2¾	3 1/16	8.00
	C-59U	12.5	0.010	0.10	U (2)	Lugs	•	3½	4⅛	3	3 7/16	2⅜	6.25
	C-80U	20.0/40.0	0.024/0.006§	0.1/0.025	U (7)	Lugs	•	5 5/16	4 9/16	5½	2¾	4½	21.25
	C-60U	22.5	0.005	0.06	U (2)	Lugs	•	3¾	4½	4 7/16	3¾	3½	12.75

†† = Inductance tolerance – 20% + 50% § Split winding
Mounting hole sizes: (1) = 3/16" (2) = 13/64 x 3/8" (7) = 9/32 x ½"

Technical Notes

1. Hi-pot tested at 1,500 VRMS.
2. Connections by leads or solder lugs.
3. Inductance tolerence -20% +50%.

Power Transformers

Power Transformers

TUV Cert. No.: R72103639
UL File: E53148
CSA File: 221330

Class B

PC Mount: World Series™

:: Description

Triad PC mount World Series transformers incorporate a dual bobbin construction with an insulating shroud, both made of a high temperature material that exceeds UL flammability requirements. These units are designed with very high isolation between the primary and secondary, and also, between each winding and the core. Since the dual bobbin construction effectively reduces capacitance, electrostatic shielding is not required. PC mount transformers are available with ratings from 2.5 VA 56.0 VA and have dimensionally accurate pin placement for through hole PC board mounting. All World Series transformers meet U.S. and International standards including CSA, IEC, TUV and UL requirements, and therefore have universal application.

:: Specifications

Primary: 115/230 V, 50/60 Hz | **VA Ranges:** 2.5 to 56.0

:: World Series

Section	Type No.	VA	Secondary		Dimensions						Pin Dim.	Mounting			WT Lbs.
			Series	Parallel	H	W	D	A	B	C		ML	MD	MW	
A	VPP10-250*	2.5	10.0V CT @ 0.25A	5.0V @ 0.5A	1⅛	1⅜	1 5/16	.200	.250	1.000	0.025 Sq.	1 1/16	•	•	0.25
	VPP10-500*	5.0	10.0V CT @ 0.5A	5.0V @ 1.0A	1⅛	1⅜	1 5/16	.200	.400	1.000	0.025 Sq.	1 1/16	•	•	0.37
	VPP10-1000*	10.0	10.0V CT @ 1.0A	5.0V @ 2.0A	1⅛	1⅞	1 9/16	.200	.400	1.140	0.036 Sq.	1¼	•	•	0.53
	VPP10-2000*	20.0	10.0V CT @ 2.0A	5.0V @ 4.0A	1⅛	2¼	1⅞	.400	.400	1.460	0.036 Sq.	1½	•	•	0.90
	VPP10-3000	30.0	10.0V CT @ 3.0A	5.0V @ 6.0A	1 9/16	2⅜	2 3/16	.550	.275	1.680	0.045 Sq.	•	1¾	2 3/16	1.15
	VPP10-5600	56.0	10.0V CT @ 5.6A	5.0V @ 11.2A	1 13/16	3	2½	.600	.300	1.900	0.045 Sq.	•	2	2½	1.70
B	VPP12-200*	2.5	12.6V CT @ 0.2A	6.3V @ 0.4A	1⅛	1⅜	1 5/16	.200	.250	1.000	0.025 Sq.	1 1/16	•	•	0.25
	VPP12-400*	5.0	12.6V CT @ 0.4A	6.3V @ 0.8A	1⅛	1⅜	1 5/16	.200	.400	1.000	0.025 Sq.	1 1/16	•	•	0.37
	VPP12-800*	10.0	12.6V CT @ 0.8A	6.3V @ 1.6A	1⅛	1⅞	1 9/16	.200	.400	1.140	0.036 Sq.	1¼	•	•	0.53
	VPP12-1600*	20.0	12.6V CT @ 1.6A	6.3V @ 3.2A	1⅛	2¼	1⅞	.400	.400	1.460	0.036 Sq.	1½	•	•	0.90
	VPP12-2400*	30.0	12.6V CT @ 2.4A	6.3V @ 4.8A	1 9/16	2⅜	2 3/16	.550	.275	1.680	0.045 Sq.	•	1¾	2 3/16	1.15
	VPP12-4400	56.0	12.6V CT @ 4.4A	6.3V @ 8.8A	1 13/16	3	2½	.600	.300	1.900	0.045 Sq.	•	2	2½	1.70
C	VPP16-150*	2.5	16.0V CT @ 0.15A	8.0V @ 0.3A	1⅛	1⅜	1 5/16	.200	.250	1.000	0.025 Sq.	1 1/16	•	•	0.25
	VPP16-310*	5.0	16.0V CT @ 0.31A	8.0V @ 0.62A	1⅛	1⅜	1 5/16	.200	.400	1.000	0.025 Sq.	1 1/16	•	•	0.37
	VPP16-620*	10.0	16.0V CT @ 0.62A	8.0V @ 1.25A	1⅛	1⅞	1 9/16	.200	.400	1.140	0.036 Sq.	1¼	•	•	0.53
	VPP16-1250*	20.0	16.0V CT @ 1.25A	8.0V @ 2.5A	1⅛	2¼	1⅞	.400	.400	1.460	0.036 Sq.	1½	•	•	0.90
	VPP16-1900*	30.0	16.0V CT @ 1.9A	8.0V @ 3.8A	1 9/16	2⅜	2 3/16	.550	.275	1.680	0.045 Sq.	•	1¾	2 3/16	1.15
	VPP16-3500	56.0	16.0V CT @ 3.5A	8.0V @ 7.0A	1 13/16	3	2½	.600	.300	1.900	0.045 Sq.	•	2	2½	1.70
D	VPP20-120*	2.5	20.0V CT @0.12A	10.0V @ 0.24A	1⅛	1⅜	1 5/16	.200	.250	1.000	0.025 Sq.	1 1/16	•	•	0.25
	VPP20-250*	5.0	20.0V CT @0.25A	10.0V @ 0.5A	1⅛	1⅜	1 5/16	.200	.400	1.000	0.025 Sq.	1 1/16	•	•	0.37
	VPP20-500*	10.0	20.0V CT @0.5A	10.0V @ 1.0A	1⅛	1⅞	1 9/16	.200	.400	1.140	0.036 Sq.	1¼	•	•	0.53
	VPP20-1000*	20.0	20.0V CT @1.0A	10.0V @ 2.0A	1⅛	2¼	1⅞	.400	.400	1.460	0.036 Sq.	1½	•	•	0.90
	VPP20-1500*	30.0	20.0V CT @1.5A	10.0V @ 3.0A	1 9/16	2⅜	2 3/16	.550	.275	1.680	0.045 Sq.	•	1¾	2 3/16	1.15
	VPP20-2800	56.0	20.0V CT @2.8A	10.0V @ 5.6A	1 13/16	3	2½	.600	.300	1.900	0.045 Sq.	•	2	2½	1.70
E	VPP24-100*	2.5	24.0V CT @0.1A	12.0V @ 0.2A	1⅛	1⅜	1 5/16	.200	.250	1.000	0.025 Sq.	1 1/16	•	•	0.25
	VPP24-210*	5.0	24.0V CT @0.21A	12.0V @ 0.42A	1⅛	1⅜	1 5/16	.200	.400	1.000	0.025 Sq.	1 1/16	•	•	0.37
	VPP24-420*	10.0	24.0V CT @0.42A	12.0V @ 0.84A	1⅛	1⅞	1 9/16	.200	.400	1.140	0.036 Sq.	1¼	•	•	0.53
	VPP24-830*	20.0	24.0V CT @0.83A	12.0V @ 1.66A	1⅛	2¼	1⅞	.400	.400	1.460	0.036 Sq.	1½	•	•	0.90
	VPP24-1250*	30.0	24.0V CT @1.25A	12.0V @ 2.50A	1 9/16	2⅜	2 3/16	.550	.275	1.680	0.045 Sq.	•	1¾	2 3/16	1.15
	VPP24-2330*	56.0	24.0V CT @2.33A	12.0V @ 4.66A	1 13/16	3	2½	.600	.300	1.900	0.045 Sq.	•	2	2½	1.70
F	VPP28-090*	2.5	28.0V CT @0.09A	14.0V @ 0.18A	1⅛	1⅜	1 5/16	.200	.250	1.000	0.025 Sq.	1 1/16	•	•	0.25
	VPP28-180*	5.0	28.0V CT @0.18A	14.0V @ 0.36A	1⅛	1⅜	1 5/16	.200	.400	1.000	0.025 Sq.	1 1/16	•	•	0.37
	VPP28-360*	10.0	28.0V CT @0.36A	14.0V @ 0.72A	1⅛	1⅞	1 9/16	.200	.400	1.140	0.036 Sq.	1¼	•	•	0.53
	VPP28-720*	20.0	28.0V CT @0.72A	14.0V @ 1.44A	1⅛	2¼	1⅞	.400	.400	1.460	0.036 Sq.	1½	•	•	0.90
	VPP28-1060*	30.0	28.0V CT @1.06A	14.0V @ 2.12A	1 9/16	2⅜	2 3/16	.550	.275	1.680	0.045 Sq.	•	1¾	2 3/16	1.15
	VPP28-2000*	56.0	28.0V CT @2.0A	14.0V @ 4.0A	1 13/16	3	2½	.600	.300	1.900	0.045 Sq.	•	2	2½	1.70
G	VPP36-070*	2.5	36.0V CT @0.07A	18.0V @ 0.14A	1⅛	1⅜	1 5/16	.200	.250	1.000	0.025 Sq.	1 1/16	•	•	0.25
	VPP36-140*	5.0	36.0V CT @0.14A	18.0V @ 0.28A	1⅛	1⅜	1 5/16	.200	.400	1.000	0.025 Sq.	1 1/16	•	•	0.37
	VPP36-280*	10.0	36.0V CT @0.28A	18.0V @ 0.56A	1⅛	1⅞	1 9/16	.200	.400	1.140	0.036 Sq.	1¼	•	•	0.53
	VPP36-560*	20.0	36.0V CT @0.56A	18.0V @ 1.12A	1⅛	2¼	1⅞	.400	.400	1.460	0.036 Sq.	1½	•	•	0.90
	VPP36-820*	30.0	36.0V CT @0.82A	18.0V @ 1.64A	1 9/16	2⅜	2 3/16	.550	.275	1.680	0.045 Sq.	•	1¾	2 3/16	1.15
	VPP36-1560*	56.0	36.0V CT @1.56A	18.0V @ 3.12A	1 13/16	3	2½	.600	.300	1.900	0.045 Sq.	•	2	2½	1.70

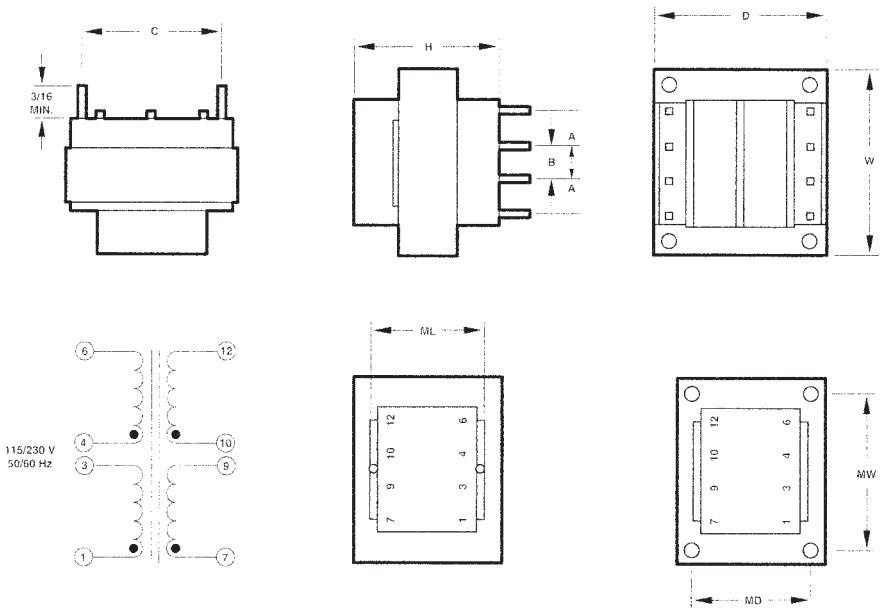
CT = Center Tap ** Note: Class 2/3 UL File: E65390*

:: Outline Dimensions

Technical Notes

1. Hi-pot tested at 4,000 VRMS.

2. Both primary and secondary coils may be connected as either series or parallel, but both must be used simultaneously.



The Sales, Service and Technical professionals at Triad Magnetics have over 100 years combined experience in the magnetics industry. This translates to solutions you can count on for your power, switching and filtering applications.

Power Transformers

TUV Cert. No.: R72103639
UL File: E53148
CSA File: 221330

Class B

Chassis Mount: Quick-Connect World Series™

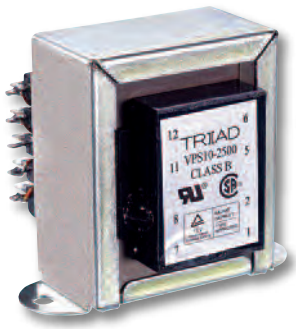


Figure A

Figure B

:: Description

Triad chassis mount World Series transformers are designed to meet U.S. and International standards including CSA, IEC, TUV and UL requirements. The transformers consist of a dual bobbin design positioned inside an insulating shroud and constructed with UL approved high temperature material. This design eliminates the need for electrostatic shielding since there is minimal capacitance between coils when using a dual bobbin configuration. The primary and secondary are both electrically isolated from each other, and from the core itself. Chassis mount World Series transformers are available in sizes ranging from 25 VA to 175 VA, and are equipped with convenient "quick connect" terminations.

:: Specifications

Primary: 115/230 V, 50/60 Hz

:: World Series

Section	Type No.	VA	Secondary Series	Secondary Parallel	Dimensions H	W	D	A	B	C	T	Figure	Mounting MW	Mounting ML	Wt. Lbs.
	VPS10-2500	25	10.0V CT @ 2.5A	5.0V @ 5.0A	2 7/16	2 1/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS10-4300	43	10.0V CT @ 4.3A	5.0V @ 8.6A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
A	**VPS10-8000**	80	10.0V CT @ 8.0A	5.0V @ 16.0A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS10-13000	130	10.0V CT @ 13.0A	5.0V @ 26.0A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS10-17500	175	10.0V CT @ 17.5A	5.0V @ 35.0A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50
	VPS12-2000	25	12.6V CT @ 2.0A	6.3V @ 4.0A	2 7/16	2 1/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS12-3400	43	12.6V CT @ 3.4A	6.3V @ 6.8A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
B	**VPS12-6300**	80	12.6V CT @ 6.3A	6.3V @ 12.6A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS12-10300	130	12.6V CT @ 10.3A	6.3V @ 20.6A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS12-14000	175	12.6V CT @ 14.0A	6.3V @ 28.0A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50
	VPS16-1600	25	16.0V CT @ 1.6A	8.0V @ 3.2A	2 7/16	2 13/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS16-2700	43	16.0V CT @ 2.7A	8.0V @ 5.4A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
C	**VPS16-5000**	80	16.0V CT @ 5.0A	8.0V @ 10.0A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS16-8100	130	16.0V CT @ 8.1A	8.0V @ 16.2A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS16-11000	175	16.0V CT @ 11.0A	8.0V @ 22.0A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50
	VPS20-1250*	25	20.0V CT @ 1.25A	10.0V @ 2.5A	2 7/16	2 13/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS20-2200*	43	20.0V CT @ 2.2A	10.0V @ 4.4A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
D	**VPS20-4000**	80	20.0V CT @ 4.0A	10.0V @ 8.0A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS20-6500	130	20.0V CT @ 6.5A	10.0V @ 13.0A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS20-8800	175	20.0V CT @ 8.8A	10.0V @ 17.6A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50
	VPS24-1000*	25	24.0V CT @ 1.0A	12.0V @ 2.0A	2 7/16	2 13/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS24-1800*	43	24.0V CT @ 1.8A	12.0V @ 3.6A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
E	**VPS24-3300**	80	24.0V CT @ 3.3A	12.0V @ 6.6A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS24-5400	130	24.0V CT @ 5.4A	12.0V @ 10.8A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS24-7300	175	24.0V CT @ 7.3A	12.0V @ 14.6A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50
	VPS28-900*	25	28.0V CT @ 0.9A	14.0V @ 1.8A	2 7/16	2 13/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS28-1500*	43	28.0V CT @ 1.5A	14.0V @ 3.0A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
F	**VPS28-2800**	80	28.0V CT @ 2.8A	14.0V @ 5.6A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS28-4600	130	28.0V CT @ 4.6A	14.0V @ 9.2A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS28-6250	175	28.0V CT @ 6.25A	14.0V @ 12.5A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50
	VPS36-700*	25	36.0V CT @ 0.7A	18.0V @ 1.4A	2 7/16	2 13/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS36-1200*	43	36.0V CT @ 1.2A	18.0V @ 2.4A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
G	**VPS36-2200***	80	36.0V CT @ 2.2A	18.0V @ 4.4A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS36-3600	130	36.0V CT @ 3.6A	18.0V @ 7.2A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS36-4800	175	36.0V CT @ 4.8A	18.0V @ 9.6A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50
H	**VPS56-2300**	130	56.0V CT @ 2.3A	28.0V @ 4.6A	3 3/8	2 7/8	3 1/16	2 7/8	1 1/2	3/8	1/4	B	2 1/4	2 1/2	4.2
	VPS230-110	25	230.0V CT @ 0.11A	115.0V @ 0.22A	2 7/16	2 13/16	1 5/16	2	1 1/8	7/16	7/16	A	2 3/8	•	1.25
	VPS230-190	43	230.0V CT @ 0.19A	115.0V @ 0.38A	2 11/16	3 1/8	2	2 5/16	1 1/8	7/16	7/16	A	2 13/16	•	1.60
I	**VPS230-350**	80	230.0V CT @ 0.35A	115.0V @ 0.7A	3	2 1/2	2 5/16	•	1 3/8	7/16	7/16	B	2	2 1/4	2.80
	VPS230-570	130	230.0V CT @ 0.57A	115.0V @ 1.14A	3 3/8	2 13/16	2 11/16	•	1 7/8	3/8	1/4	B	2 1/4	2 1/2	4.10
	VPS230-760	175	230.0V CT @ 0.76A	115.0V @ 1.52A	3 3/4	3 1/8	2 13/16	•	1 7/8	3/8	1/4	B	2 1/2	2 1/2	5.50

** Note: Class 2/3 UL File: E65390 CT = Center Tap Mounting Hole Sizes: 25 VA, 43 VA = 3/16" 80 VA, 130 VA, 175 VA = 13/64 x 3/8" CT = Center Tap*

:: Outline Dimensions

Technical Notes

1. Hi-pot tested at 4,000 VRMS.
2. Both primary and secondary coils may be connected as either series or parallel, but both must be used simultaneously.

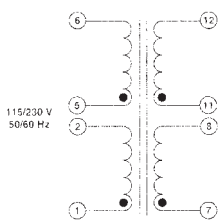


Figure A

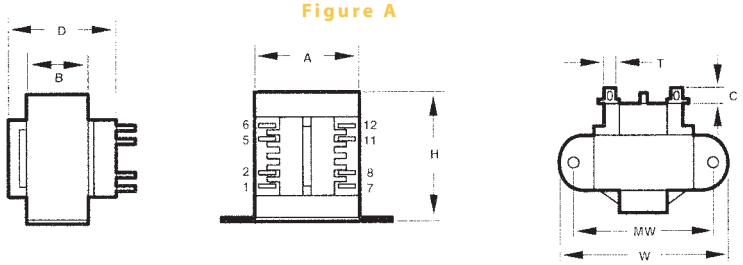
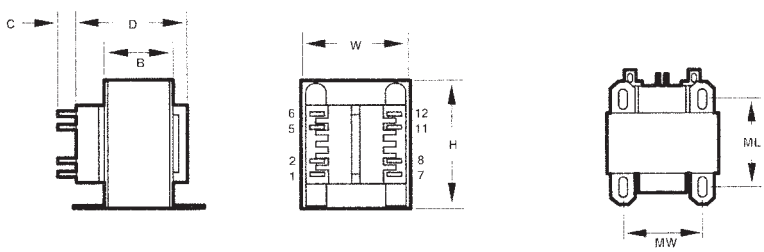


Figure B



Triad Magnetics is a global leader and trusted name in magnetics for more than 50 years.

Power Transformers

TUV Cert. No.: R72103639
UL File: E65390

Chassis Mount: Leaded World Series™

Case Type U

Case Type X

:: Description

Triad International Series transformers are constructed with European style split bobbins to meet International safety agency standards. The split bobbin construction reduces interwinding capacitance and eliminates the need for electrostatic shielding.

:: Specifications

Available in sizes from 5 VA to 56 VA 115 V / 230 V 50/60 Hz Primary windings; 3,500 V isolation between primary and secondary; designed with 6 mm creepage distance primary to secondary.

:: International Series

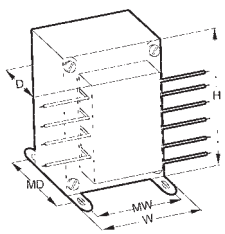
Secton	Part Number	VA	Secondary Series Connected Volts	Secondary Series Connected Amps	Secondary Parallel Connected Volts	Secondary Parallel Connected Amps	Center Tap	Schematic	Case Type	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Weight Lbs.
	VPL10-500*	5	10.0 CT	0.500	5.00	1.000	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL12-400*	5	12.6 CT	0.390	6.30	0.780	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL14-360*	5	14.0 CT	0.360	7.00	0.710	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL16-300*	5	16.0 CT	0.310	8.00	0.620	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
A	**VPL20-250***	5	20.0 CT	0.250	10.00	0.500	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL24-210*	5	24.0 CT	0.210	12.00	0.420	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL26-190	5	26.8 CT	0.190	13.40	0.370	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL28-180*	5	28.0 CT	0.180	14.00	0.360	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL36-140*	5	36.0 CT	0.140	18.00	0.280	N	2	X	1 7/16"	2 5/8"	1 7/16"	2	•	0.4
	VPL2-4000	10	2.5 CT	4.000	1.25	8.000	N	2	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
	VPL10-1000*	10	10.0 CT	1.000	5.00	2.000	N	2	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
	VPL12-800*	10	12.6 CT	0.790	6.30	1.590	Y	1	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
B	**VPL16-600***	10	16.0 CT	0.630	8.00	1.260	N	2	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
	VPL20-500*	10	20.0 CT	0.500	10.00	1.000	N	2	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
	VPL24-400*	10	24.0 CT	0.410	12.00	0.820	N	2	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
	VPL28-350*	10	28.0 CT	0.350	14.00	0.700	N	2	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
	VPL36-300*	10	36.0 CT	0.280	18.00	0.560	N	2	X	1 3/4"	2 13/16"	1 3/4"	2 5/8"	•	0.7
	VPL2-10000	25	2.5 CT	10.000	1.25	20.000	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL10-2500	25	10.0 CT	2.500	5.00	5.000	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL12-2000	25	12.6 CT	1.980	6.30	3.960	Y	1	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL16-1600	25	16.0 CT	1.570	8.00	3.130	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
C	**VPL20-1200***	25	20.0 CT	1.250	10.00	2.500	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL24-1100*	25	24.0 CT	1.040	12.00	2.080	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL25-1000*	25	25.2 CT	0.990	12.60	1.980	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL26-930	25	26.8 CT	0.930	13.40	1.860	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL28-900*	25	28.0 CT	0.890	14.00	1.790	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL36-700*	25	36.0 CT	0.700	18.00	1.400	N	2	X	1 15/16"	3 1/4"	2 1/8"	2 13/16"	•	1.3
	VPL10-5000	50	10.0 CT	5.000	5.00	10.000	N	2	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
	VPL12-4000	50	12.6 CT	3.970	6.30	7.940	Y	1	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
	VPL16-3100	50	16.0 CT	3.125	8.00	6.250	N	2	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
	VPL20-2500	50	20.0 CT	2.500	10.00	5.000	N	2	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
D	**VPL24-2000**	50	24.0 CT	2.083	12.00	4.166	N	2	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
	VPL25-1900*	50	25.2 CT	1.984	•	•	N	3	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
	VPL26-1800	50	26.8 CT	1.866	•	•	N	3	X	2 9/16"	4"	2-1/4"	3 9/16"	•	2.3
	VPL28-1700*	50	28.0 CT	1.786	14.00	3.572	N	2	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
	VPL36-1400*	50	36.0 CT	1.389	18.00	2.778	N	2	X	2 9/16"	4"	2 1/4"	3 9/16"	•	2.3
E	**VPL28-2000**	56	28.0 CT	2.000	14.00	4.000	Y	1	U	3 9/16"	2 9/16"	2 5/8"	2"	2 1/4"	2.7

Technical Note: Primary and secondary windlings are designed to be connected in Series or Parallel. Windings are not intended to be used independently.
*CT = Center Tap * Note: Class 2/3 UL File: E65390, others TUV only*

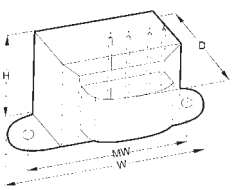
:: Outline Dimensions

Technical Notes

1. Primary and secondary windings are designed to be connected in series or parallel. Windings are not intended to be used independently.

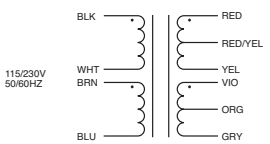


Case Type U

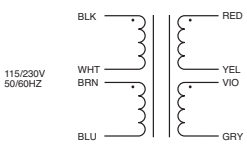


Case Type X

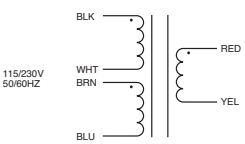
Schematic 1



Schematic 2



Schematic 3



Power Transformers

Class B

UL File: E122529

Toroidal Mount: World Series™

:: Description

Triad chassis mount World Series Toroidal transformers are efficient, compact, cool running and cost effective. They are approved to UL 506 and CE IEC 61558-1 and 61558-2-6, and are constructed with a Class B (130C) rated insulation system. These toroidal transformers have minimal stray fields for quiet operation around sensitive circuits. The transformers consist dual primaries and dual secondaries which allows for flexibility in the input and output voltages. The primary and secondary are both electrically isolated from each other and from the core itself. Chassis mount Toroidal World Series transformers are available in sizes ranging from 25 VA to 2,500 VA and are equipped with leads for connections.

:: Specifications

Primary: 115/230 V, 50/60 Hz | **VA Ranges:** 25 to 2,500

:: Toroidal Mount: World Series

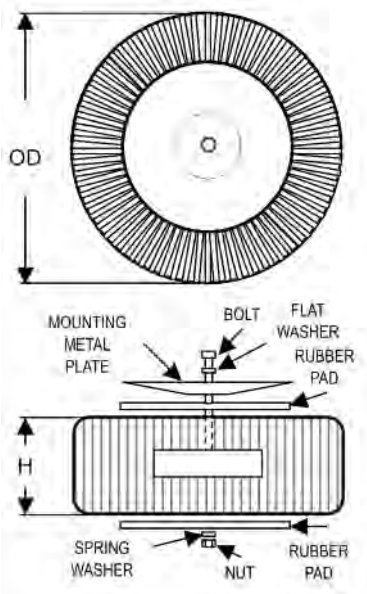
Section	Type No.	VA	Secondary		Regulation Typ.	Efficiency Typ.	Temp Rise Typ. degree (C)	Style
			Series	Parallel				
A	VPT12-2080	25	12V CT @ 2.08A	6.0V @ 4.16A	12.0%	88%	30	1
	VPT18-1390	25	18V CT @ 1.39A	9.0V 2.78A	12.0%	88%	30	1
	VPT24-1040	25	24V CT @ 1.04A	12V @ 2.08A	12.0%	88%	30	1
	VPT30-830	25	30V CT @ 0.83A	15V @ 1.66A	12.0%	88%	30	1
	VPT36-690	25	36V CT @ 0.69A	18V @ 1.38A	12.0%	88%	30	1
	VPT48-520	25	48V CT @ 0.52A	24V @ 1.04A	12.0%	88%	30	1
	VPT230-110	25	230V CT @ 0.11A	115V @ .22A	12.0%	88%	30	1
B	VPT12-4170	50	12V CT @ 4.17A	6.0V @ 8.34A	12.0%	88%	40	1
	VPT18-2780	50	18V CT @ 2.78A	9.0V 5.56A	12.0%	88%	40	1
	VPT24-2080	50	24V CT @ 2.08A	12V @ 4.16A	12.0%	88%	40	1
	VPT30-1670	50	30V CT @ 1.67A	15V @ 3.34A	12.0%	88%	40	1
	VPT36-1390	50	36V CT @ 1.39A	18V @ 2.78A	12.0%	88%	40	1
	VPT48-1040	50	48V CT @ 1.04A	24V @ 2.08A	12.0%	88%	40	1
	VPT230-220	50	230V CT @ 0.22A	115V @ .44A	12.0%	88%	40	1
C	VPT12-8330	100	12V CT @ 8.33A	6.0V @ 16.66A	9.0%	89%	45	1
	VPT18-5560	100	18V CT @ 5.56A	9.0V @ 11.12A	9.0%	89%	45	1
	VPT24-4170	100	24V CT @ 4.17A	12V @ 8.34A	9.0%	89%	45	1
	VPT30-3330	100	30V CT @ 3.33A	15V @ 6.66A	9.0%	89%	45	1
	VPT36-2780	100	36V CT @ 2.78A	18V @ 5.56A	9.0%	89%	45	1
	VPT48-2080	100	48V CT @ 2.08A	24V @ 4.16A	9.0%	89%	45	1
	VPT230-430	100	230V CT @ 0.43A	115V @ .86A	9.0%	89%	45	1
D	VPT12-13300	160	12V CT @ 13.3A	6.0V @ 26.6A	8.0%	90%	50	1
	VPT18-8800	160	18V CT @ 8.8A	9.0V @ 17.60A	8.0%	90%	50	1
	VPT24-6670	160	24V CT @ 6.67A	12V @ 13.34A	8.0%	90%	50	1
	VPT30-5330	160	30V CT @ 5.33A	15V @ 10.66A	8.0%	90%	50	1
	VPT36-4440	160	36V CT @ 4.44A	18V @ 8.88A	8.0%	90%	50	1
	VPT48-3300	160	48V CT @ 3.33A	24V @ 6.66A	8.0%	90%	50	1
	VPT230-700	160	230V CT @ 0.70A	115V @ 1.40A	8.0%	90%	50	1
E	VPT12-20800	250	12V CT @ 20.8A	6.0V @ 41.60A	7.0%	92%	50	1
	VPT18-13800	250	18V CT @ 13.8A	9.0V @ 27.60A	7.0%	92%	50	1
	VPT24-10420	250	24V CT @ 10.42A	12V @ 20.84A	7.0%	92%	50	1
	VPT36-6940	250	36V CT @ 6.94A	18V @ 13.88A	7.0%	92%	50	1
	VPT48-5200	250	48V CT @ 5.20A	24V @ 10.4A	7.0%	92%	50	1
	VPT230-1090	250	230V CT @ 1.09A	115V @ 2.18A	7.0%	92%	50	1
F	VPT48-10400	500	48V CT @ 10.4A	24V @ 20.8A	5.0%	94%	50	1
	VPT100-5000	500	100V CT @ 5.0A	50V @ 10.0A	5.0%	94%	50	1
	VPT230-2170	500	230V CT @ 2.17A	115V @ 4.34A	5.0%	94%	50	1
G	VPT48-20830	1000	48V CT @ 20.83A	24V @ 41.66A	4.0%	96%	50	1
	VPT100-10000	1000	100V CT @ 10.0A	50V @ 20.0A	4.0%	96%	50	1
	VPT230-4350	1000	230V CT @ 4.35A	115V @ 8.70A	4.0%	96%	50	1
H	VPT100-25000	2500	100V CT @ 25.0A	50V @ 50.0A	2.5%	97%	50	2
	VPT230-10870	2500	230V CT @ 10.87A	115V @ 21.74A	2.5%	97%	50	2

:: Outline Dimensions

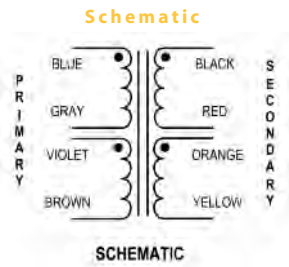
Technical Notes

1. Series Connections: ***Input***[1]***:*** *Series – BLUE and BROWN, Jumper GRAY to VIOLET*
Parallel – BLUE and BROWN, Jumper BLUE to VIOLET, GRAY to BROWN
Output[1]***:*** *Series – BLACK and YELLOW, Jumper RED to ORANGE*
Parallel – BLACK and YELLOW, Jumper BLACK to ORANGE, RED to YELLOW

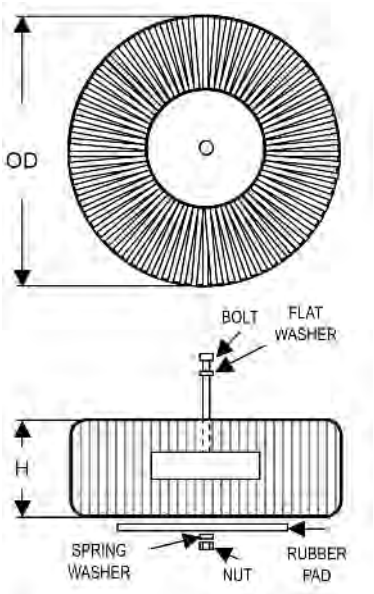
Style 1



Schematic



Style 2



:: Mechanical Specifications

VA	OD (mm)	HT (mm)	Weight (kg)	Mounting Plate (mm Dia.)	Rubber Pads (mm Dia.)	Mounting Hardware
25	71	32	0.4	55	57 & 57	M5 x 40mm
50	80	33	0.6	55	57 & 57	M5 x 45mm
100	87	47	1	55	57 & 75	M6 x 55mm
160	103	48	1.6	75	75 & 75	M6 x 60mm
250	112	54	2.2	75	75 & 90	M6 x 65mm
500	140	60	4.2	90	90 & 115	M8 x 70mm
1000	175	68	8.2	112	115 & 148	M8 x 80mm
2500	208	112	19.4	----	165	M8 x 120mm

[1] *Primary and secondary windings are designed to be connected in series or parallel. Windings are not intended to be used independently. For additional technical information, please visit TriadMagnetics.com.*

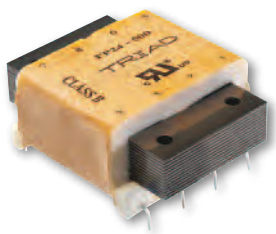
Triad Magnetics is in the business to provide our customers with the best solutions for their magnetics needs.

Power Transformers

UL Recognized
UL File: E53148

Class B

PC Mount: Flat Pack™



:: Flat Pack

:: Description

The Triad Flat pack power transformer is designed to meet the needs of lower clearance PC board and solid state power designs. These units can also be used for control and instrumentation applications. Voltages and currents were chosen for widely used power applications. It is offered in a dual primary and dual secondary configuration.

:: Specifications

Primary: 115/230 V, 50/60 Hz | **Hi Pot Tested:** 2,000 VRMS | **Low Profile:** Allows 3/4" card spacing for 2.5 VA units; Allows 1" card spacing for 6 VA units; Allows 1 1/4" card spacing for 12 VA units: Allows 1 1/2" card spacing for 24 VA and 48 VA units.

Section	Part Number	VA	Series	Parallel	Dimensions H	W	L	A	B	C	Wt. Oz.	MW	ML
A	FP10-250	2.5	10.0V CT @ 0.25A	5.0V @ 0.5A	0.650	1.562	1.875	1.600	0.375	0.375	5	.88	1.62
	FP12-200		12.6V CT @ 0.2A	6.3V @ 0.4A									
	FP16-150		16.0 CT @ 0.15A	8.0V @ 0.3A									
	FP20-125		20.0 CT @ 0.125A	10.0V @ 0.25A									
	FP24-100		24.0 CT @ 0.1A	12.0V @ 0.2A									
	FP30-85		30.0V CT @ 0.08A	15.0V @0.16A									
	FP34-75		34.0V CT @ 0.075A	17.0V @ 0.15A									
	FP40-60		40.0V CT @ 0.06A	20.0V @ 0.12A									
	FP56-45		56.0V CT @ 0.045A	28.0V @ 0.09A									
	FP88-28		88.0V CT @ 0.028A	44.0V @ 0.056A									
	FP120-20		120.0V CT @ 0.02A	60.0V @ 0.04A									
	FP230-10		230.0V CT @ 0.01A	115.0V @ 0.02A									
B	FP10-600	6.0	10.0V CT @ 0.6A	5.0V @ 1.2A	0.875	1.562	1.875	1.600	0.375	0.375	7	.88	1.62
	FP12-475		12.6V CT @ 0.475A	6.3V @ 0.95A									
	FP16-375		16.0 CT @ 0.375A	8.0V @ 0.75A									
	FP20-300		20.0 CT @ 0.3A	10.0V @ 0.8A									
	FP24-250		24.0 CT @ 0.25A	12.0V @ 0.5A									
	FP30-200		30.0V CT @ 0.2A	15.0V @ 0.4A									
	FP34-170		34.0V CT @ 0.17A	17.0V @ 0.34A									
	FP40-150		40.0V CT @ 0.15A	20.0V @ 0.3A									
	FP56-100		56.0V CT @ 0.1A	28.0V @ 0.2A									
	FP88-65		88.0V CT @ 0.065A	44.0V @ 0.13A									
	FP120-50		120.0V CT @ 0.05A	60.0V @ 0.1A									
	FP230-25		230.0V CT @ 0.025A	115.0V @ 0.05A									
C	FP10-1200	12.0	10.0V CT @ 1.2A	5.0V @ 2.4A	1.062	2.000	2.500	2.000	0.500	0.500	11	1.0	2.0
	FP12-950		12.6V CT @ 0.95A	6.3V @ 1.9A									
	FP16-750		16.0 CT @ 0.75A	8.0V @ 1.5A									
	FP20-600		20.0 CT @ 0.6A	10.0V @ 1.2A									
	FP24-500		24.0 CT @ 0.5A	12.0V @ 1.0A									
	FP30-400		30.0V CT @ 0.4A	15.0V @ 0.8A									
	FP34-340		34.0V CT @ 0.34A	17.0V @ 0.68A									
	FP40-300		40.0V CT @ 0.3A	20.0V @ 0.6A									
	FP56-200		56.0V CT @ 0.2A	28.0V @ 0.4A									
	FP88-130		88.0V CT @ 0.13A	44.0V @ 0.26A									
	FP120-100		120.0V CT @ 0.1A	60.0V @ 0.2A									
	FP230-50		230.0V CT @ 0.05A	115.0V @ 0.1A									
D	FP10-2400	24	10.0V CT @ 2.4A	5.0V @ 4.8A	1.375	2.25	2.756	1.9	0.600	0.531	15	1.1	2.44
	FP12-1900		12.6V CT @ 1.9A	6.3V @ 3.8A									
	FP16-1500		16.0V CT @ 1.5A	8.0V @ 3.0A									
	FP20-1200		20.0V CT @ 1.2A	10.0V @ 2.4A									
	FP24-1000		24.0V CT @ 1.0A	12.0V @ 2.0A									
	FP30-800		30V CT @ 0.80	15.0V @ 1.6A									
	FP34-700		34V CT @ 0.70	17.0V @ 1.4A									
	FP40-600		40V CT @ 0.60	20.0V @ 1.2A									
	FP56-425		56V CT @ 0.425	28.0V @ 0.85A									
E	FP10-4800	48	10V CT @ 4.8A	5.0V @ 9.6A	1.375	2.5	3.12	2.18	0.600	0.669	21	1.26	2.52
	FP12-3800		12.6V CT @ 3.8A	6.3V @ 7.6A									
	FP16-3000		16V CT @ 3.0A	8.0V @ 6.0A									
	FP20-2400		20.0V CT @ 2.4A	10.0V @ 4.8A									
	FP24-2000		24.0V CT @ 2.0A	12.0V @ 4.0A									
	FP30-1600		30.0V CT @ 1.6A	15.0V @ 3.2A									
	FP34-1400		34.0V CT @ 1.4A	17.0V @ 2.8A									
	FP40-1200		40.0V CT @ 1.2A	20.0V @ 2.4A									
	FP56-850		56.0V CT @ 0.85A	28.0V @ 1.7A									

CT = Center Tap

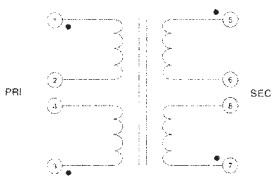
:: Outline Dimensions

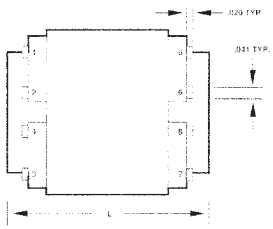
Technical Notes

1. Hi-pot tested at 2,000 VRMS.

2. Split bobbin with side-by-side windings to reduce capacitance and eliminate the need for a static shield.

2. Mounting Holes: 2.5 VA & 6VA = 0.125"; 12 VA = 0.165"; 24 VA = 0.157"; 48 VA = 0.20"





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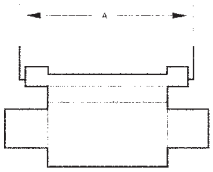
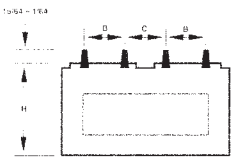


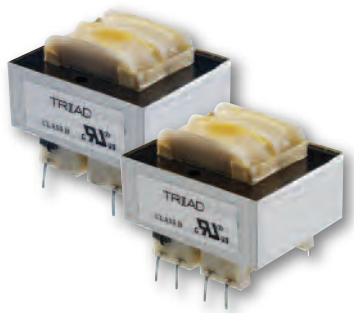


Power Transformers

UL Recognized
UL File: E53148

Class B

PC Mount: Split Pack



:: Description

The Triad Split Pack split bobbin transformer is an extremely versatile tool for PC board applications. Split Pack transformers are nonconcentrically wound -- with primaries and secondaries side-by-side. Unlike the secondary-on-top-of-primary designs of standard PC board transformers, the split bobbin winding and low capacitive coupling eliminate costly electrostatic shielding. It is offered in a dual secondary configuration with either single or dual primaries.

:: Specifications

Primary: 115 V or 115/230 V, 50/60Hz | **VA Ranges:** 1.1 to 36.0
Secondary: Series - 10 to 120 V; Parallel - 5 to 60 V

:: Split Pack

Section	Single Primary 6 Pin	Dual Primary 8 Pin	VA	Secondary		Dimensions								Wt. Lbs.	Fig
				Series	Parallel	H	W	L	MW	ML	A	B	C		
A	F10-110 F12-090 F16-070 F20-055 F24-045 F28-040 F36-030 F48-023 F56-020 F120-010	FS10-110 FS12-090 FS16-070 FS20-055 FS24-045 FS28-040 FS36-030 FS48-023 FS56-020 FS120-010	1.1	10.0V CT @ 0.11A 12.6V CT @ 0.09A 16.0V CT @ 0.07A 20.0V CT @ 0.055A 24.0V CT @ 0.045A 28.0V CT @ 0.040A 36.0V CT @ 0.03A 48.0V CT @ 0.023A 56.0V CT @ 0.02A 120.0V CT @ 0.01A	5.0V @ 0.22A 6.3V @ 0.18A 8.0V @ 0.14A 10.0V @ 0.11A 12.0V @ 0.09A 14.0V @ 0.08A 18.0V @ 0.06A 24.0V @ 0.046A 28.0V @ 0.04A 60.0V @ 0.02A	15/16	1 1/8	1 1/8	•	•	0.250	0.250	1.20	0.17	1
B	F10-250 F12-200 F16-150 F20-120 F24-100 F28-85 F36-65 F48-050 F56-045 F120-020	FS10-250 FS12-200 FS16-150 FS20-120 FS24-100 FS28-85 FS36-65 FS48-050 FS56-045 FS120-020	2.5	10.0V CT @ 0.25A 12.6V CT @ 0.2A 16.0V CT @ 0.15A 20.0V CT @ 0.12A 24.0V CT @ 0.1A 28.0V CT @ 0.085A 36.0V CT @ 0.065A 48.0V CT @ 0.05A 56.0V CT @ 0.045A 120.0V CT @ 0.02A	5.0V @ 0.5A 6.3V @ 0.4A 8.0V @ 0.3A 10.0V @ 0.24A 12.0V @ 0.2A 14.0V @ 0.17A 18.0V @ 0.13A 24.0V @ 0.1A 28.0V @ 0.09A 60.0V @ 0.04A	1 1/16	1 1/8	1 1/8	•	•	0.250	0.250	1.20	0.25	1
C	F10-600 F12-500 F16-400 F20-300 F24-250 F28-200 F36-170 F48-125 F56-110 F120-050	FS10-600 FS12-500 FS16-400 FS20-300 FS24-250 FS28-200 FS36-170 FS48-125 FS56-110 FS120-050	6.0	10.0V CT @ 0.6A 12.6V CT @ 0.5A 16.0V CT @ 0.4A 20.0V CT @ 0.3A 24.0V CT @ 0.25A 28.0V CT @ 0.2A 36.0V CT @ 0.17A 48.0V CT @ 0.125A 56.0V CT @ 0.11A 120.0V CT @ 0.05A	5.0V @ 1.2A 6.3V @ 1.0A 8.0V @ 0.8A 10.0V @ 0.6A 12.0V @ 0.5A 14.0V @ 0.4A 18.0V @ 0.34A 24.0V @ 0.25A 28.0V @ 0.22A 60.0V @ 0.1A	1 1/16	1 5/16	1 1/8	1 1/16	•	0.250	0.350	1.280	0.44	1
D	F10-1200 F12-1000 F16-800 F20-600 F24-500 F28-420 F36-350 F48-250 F56-220 F120-100	FS10-1200 FS12-1000 FS16-800 FS20-600 FS24-500 FS28-420 FS36-350 FS48-250 FS56-220 FS120-100	12.0	10.0V CT @ 1.2A 12.6V CT @ 1.0A 16.0V CT @ 0.8A 20.0V CT @ 0.6A 24.0V CT @ 0.5A 28.0V CT @ 0.42A 36.0V CT @ 0.35A 48.0V CT @ 0.25A 56.0V CT @ 0.22A 120.0V CT @ 0.1A	5.0V @ 2.4A 6.3V @ 2.0A 8.0V @ 1.6A 10.0V @ 1.2A 12.0V @ 1.0A 14.0V @ 0.84A 18.0V @ 0.7A 24.0V @ 0.5A 28.0V @ 0.44A 60.0V @ 0.2A	1 1/16	1 5/16	1 1/8	1 1/4	•	0.30	0.40	1.410	0.70	1
E	F10-2000 F12-1600 F16-1250 F20-1000 F24-800 F28-700 F36-550 F48-400 F56-350 F120-160	FS10-2000 FS12-1600 FS16-1250 FS20-1000 FS24-800 FS28-700 FS36-550 FS48-400 FS56-350 FS120-160	20.0	10.0V CT @ 2.0A 12.6V CT @ 1.6A 16.0V CT @ 1.25A 20.0V CT @ 1.0A 24.0V CT @ 0.8A 28.0V CT @ 0.7A 36.0V CT @ 0.55A 48.0V CT @ 0.4A 56.0V CT @ 0.35A 120.0V CT @ 0.16A	5.0V @ 4.0A 6.3V @ 3.2A 8.0V @ 2.5A 10.0V @ 2.0A 12.0V @ 1.6A 14.0V @ 1.4A 18.0V @ 1.1A 24.0V @ 0.8A 28.0V @ 0.7A 60.0V @ 0.32A	1 1/16	1 7/8	2 1/4	1 1/2	•	0.30	0.40	1.60	0.80	1

CT = Center Tap

:: Split Pack continued

Section	Single Primary 6 Pin	Dual Primary 8 Pin	VA	Secondary		Dimensions								Wt. Lbs.	Fig
				Series	Parallel	H	W	L	MW	ML	A	B	C		
A	F10-3600	FS10-3600	36.0	10.0V CT @ 3.6A	5.0V @ 7.2A	1 7/16	2 9/16	2 3/8	1.75	2.188	0.40	0.40	1.850	1.1	2
	F12-2850	FS12-2850		12.6V CT @ 2.85A	6.3V @ 5.7A										
	F16-2250	FS16-2250		16.0V CT @ 2.25A	8.0V @ 4.5A										
	F20-1800	FS20-1800		20.0V CT @ 1.8A	10.0V @ 3.6A										
	F24-1500	FS24-1500		24.0V CT @ 1.5A	12.0V @ 3.0A										
	F28-1300	FS28-1300		28.0V CT @ 1.3A	14.0V @ 2.6A										
	F36-1000	FS36-1000		36.0V CT @ 1.0A	18.0V @ 2.0A										
	F48-750	FS48-750		48.0V CT @ 0.75A	24.0V @ 1.5A										
	F56-650	FS56-650		56.0V CT @ 0.65A	28.0V @ 1.3A										
	F120-300	FS120-300		120.0V CT @ 0.3A	60.0V @ 0.6A										

CT = Center Tap

:: Outline Dimensions

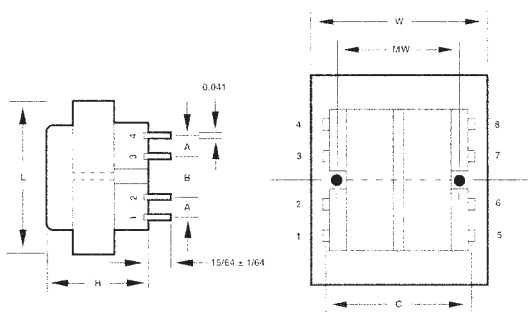
Technical Notes

1. Hi-pot tested at 2,500 VRMS.
2. PC terminal pin spacing for accurate placement.
3. 115 V connect primary in parallel.
230 V connect primary in series.

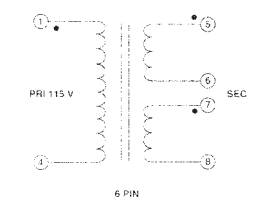
4. Series Connections: *Primary* - Input 1 & 4
Connect 2 & 3
Secondary - Input 5 & 8
Connect 6 & 7

5. Parallel Connections: *Primary* - Input 1 & 2
Connect 1 & 3. 2 & 4
Secondary - Input 5 & 8
Connect 5 & 7, 6 & 8

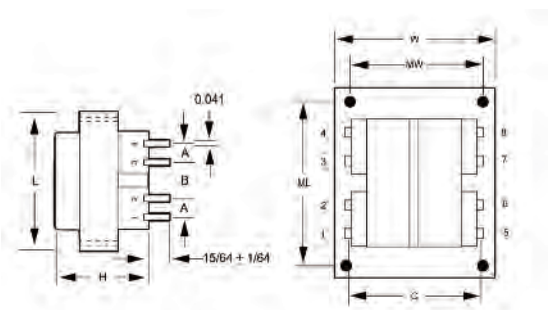
6. For single primary, omit pins 2 and 3.
7. 1.1 & 2.5 VA are not offered with mounting holes.



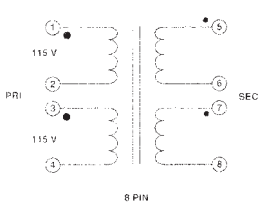
Bottom view
Figure 1



Single Primary



Bottom view
Figure 2



Dual Primary

Power Transformers

TUV Cert. No.: R72120839
UL Recognized
UL File: E65390

Class F

PC Mount: Split Pack™ Class 2/3

:: Description

The Triad Split Pack split bobbin transformer is an extremely versatile tool for PC board applications. Split Pack transformers are nonconcentrically wound -- with primaries and secondaries side-by-side. Unlike the secondary-on-top-of-primary designs of standard PC board transformers, the split bobbin winding and low capacitive coupling eliminate costly electrostatic shielding. It is offered in a dual secondary configuration with either single or dual primaries.

:: Specifications

Primary: 115 V or 115/230 V, 50/60 Hz | **VA Ranges:** 1.1 to 36.0
Secondary: Series - 10 to 56 V; Parallel - 5 to 28 V

:: Split Pack Class 2/3

Section	Single Primary 6 Pin	Dual Primary 8 Pin	VA	Secondary Series	Secondary Parallel	H	W	L	MW	ML	A	B	C	Wt. Lbs.	Fig
A	F10-110-C2	* FS10-110-C2	1.1	10.0V CT @ 0.11A	5.0V @ 0.22A	15/16	1 1/8	1 3/8	•	•	0.250	0.250	1.20	0.17	1
	F12-090-C2	* FS12-090-C2		12.6V CT @ 0.09A	6.3V @ 0.18A										
	F16-070-C2	* FS16-070-C2		16.0V CT @ 0.07A	8.0V @ 0.14A										
	F20-055-C2	* FS20-055-C2		20.0V CT @ 0.055A	10.0V @ 0.11A										
	F24-045-C2	* FS24-045-C2		24.0V CT @ 0.045A	12.0V @ 0.09A										
	F28-040-C2	* FS28-040-C2		28.0V CT @ 0.040A	14.0V @ 0.08A										
	F36-030-C2	* FS36-030-C2		36.0V CT @ 0.03A	18.0V @ 0.06A										
	F48-023-C2	* FS48-023-C2		48.0V CT @ 0.023A	24.0V @ 0.046A										
	F56-020-C2	FS56-020-C2		56.0V CT @ 0.02A	28.0V @ 0.04A										
B	F10-250-C2	* FS10-250-C2	2.5	10.0V CT @ 0.25A	5.0V @ 0.5A	1 3/16	1 1/8	1 3/8	•	•	0.250	0.250	1.20	0.25	1
	F12-200-C2	* FS12-200-C2		12.6V CT @ 0.2A	6.3V @ 0.4A										
	F16-150-C2	* FS16-150-C2		16.0V CT @ 0.15A	8.0V @ 0.3A										
	F20-120-C2	* FS20-120-C2		20.0V CT @ 0.12A	10.0V @ 0.24A										
	F24-100-C2	* FS24-100-C2		24.0V CT @ 0.1A	12.0V @ 0.2A										
	F28-85-C2	* FS28-85-C2		28.0V CT @ 0.085A	14.0V @ 0.17A										
	F36-65-C2	* FS36-65-C2		36.0V CT @ 0.065A	18.0V @ 0.13A										
	F48-050-C2	* FS48-050-C2		48.0V CT @ 0.05A	24.0V @ 0.1A										
	F56-045-C2	FS56-045-C2		56.0V CT @ 0.045A	28.0V @ 0.09A										
C	F10-600-C2	* FS10-600-C2	6.0	10.0V CT @ 0.6A	5.0V @ 1.2A	1 3/16	1 3/16	1 3/8	1 3/16	•	0.250	0.350	1.280	0.44	1
	F12-500-C2	* FS12-500-C2		12.6V CT @ 0.5A	6.3V @ 1.0A										
	F16-400-C2	* FS16-400-C2		16.0V CT @ 0.4A	8.0V @ 0.8A										
	F20-300-C2	* FS20-300-C2		20.0V CT @ 0.3A	10.0V @ 0.6A										
	F24-250-C2	* FS24-250-C2		24.0V CT @ 0.25A	12.0V @ 0.5A										
	F28-200-C2	* FS28-200-C2		28.0V CT @ 0.2A	14.0V @ 0.4A										
	F36-170-C2	* FS36-170-C2		36.0V CT @ 0.17A	18.0V @ 0.34A										
	F48-125-C2	* FS48-125-C2		48.0V CT @ 0.125A	24.0V @ 0.25A										
	F56-110-C2	FS56-110-C2		56.0V CT @ 0.11A	28.0V @ 0.22A										
D	F10-1200-C2	* FS10-1200-C2	12.0	10.0V CT @ 1.2A	5.0V @ 2.4A	1 7/16	1 3/16	1 3/8	1 1/4	•	0.30	0.40	1.410	0.70	1
	F12-1000-C2	* FS12-1000-C2		12.6V CT @ 1.0A	6.3V @ 2.0A										
	F16-800-C2	* FS16-800-C2		16.0V CT @ 0.8A	8.0V @ 1.6A										
	F20-600-C2	* FS20-600-C2		20.0V CT @ 0.6A	10.0V @ 1.2A										
	F24-500-C2	* FS24-500-C2		24.0V CT @ 0.5A	12.0V @ 1.0A										
	F28-420-C2	* FS28-420-C2		28.0V CT @ 0.42A	14.0V @ 0.84A										
	F36-350-C2	* FS36-350-C2		36.0V CT @ 0.35A	18.0V @ 0.7A										
	F48-250-C2	* FS48-250-C2		48.0V CT @ 0.25A	24.0V @ 0.5A										
	F56-220-C2	FS56-220-C2		56.0V CT @ 0.22A	28.0V @ 0.44A										
E	F10-2000-C2	* FS10-2000-C2	20.0	10.0V CT @ 2.0A	5.0V @ 4.0A	1 7/16	1 7/8	2 1/4	1 1/2	•	0.30	0.40	1.60	0.80	1
	F12-1600-C2	* FS12-1600-C2		12.6V CT @ 1.6A	6.3V @ 3.2A										
	F16-1250-C2	* FS16-1250-C2		16.0V CT @ 1.25A	8.0V @ 2.5A										
	F20-1000-C2	* FS20-1000-C2		20.0V CT @ 1.0A	10.0V @ 2.0A										
	F24-800-C2	* FS24-800-C2		24.0V CT @ 0.8A	12.0V @ 1.6A										
	F28-700-C2	* FS28-700-C2		28.0V CT @ 0.7A	14.0V @ 1.4A										
	F36-550-C2	* FS36-550-C2		36.0V CT @ 0.55A	18.0V @ 1.1A										
	F48-400-C2	* FS48-400-C2		48.0V CT @ 0.4A	24.0V @ 0.8A										
	F56-350-C2	FS56-350-C2		56.0V CT @ 0.35A	28.0V @ 0.7A										

*CT = Center Tap * Note: TUV Approved*

:: Split Pack Class 2/3 continued

Section	Single Primary 6 Pin	Dual Primary 8 Pin	VA	Secondary Series	Secondary Parallel	H	W	L	MW	ML	A	B	C	Wt. Lbs.	Fig
A	**F10-3600-C2**	*** FS10-3600-C2**	36.0	10.0V CT @ 3.6A	5.0V @ 7.2A	1 1/16	2 3/16	2 5/8	1.75	2.188	0.40	0.40	1.850	1.1	2
	F12-2850-C2	*** FS12-2850-C2**		12.6V CT @ 2.85A	6.3V @ 5.7A										
	F16-2250-C2	*** FS16-2250-C2**		16.0V CT @ 2.25A	8.0V @ 4.5A										
	F20-1800-C2	*** FS20-1800-C2**		20.0V CT @ 1.8A	10.0V @ 3.6A										
	F24-1500-C2	*** FS24-1500-C2**		24.0V CT @ 1.5A	12.0V @ 3.0A										
	F28-1300-C2	*** FS28-1300-C2**		28.0V CT @ 1.3A	14.0V @ 2.6A										
	F36-1000-C2	*** FS36-1000-C2**		36.0V CT @ 1.0A	18.0V @ 2.0A										
	F48-750-C2	*** FS48-750-C2**		48.0V CT @ 0.75A	24.0V @ 1.5A										
	F56-650-C2	**FS56-650-C2**		56.0V CT @ 0.65A	28.0V @ 1.3A										

CT = Center Tap ** Note: TUV Approved*

:: Outline Dimensions

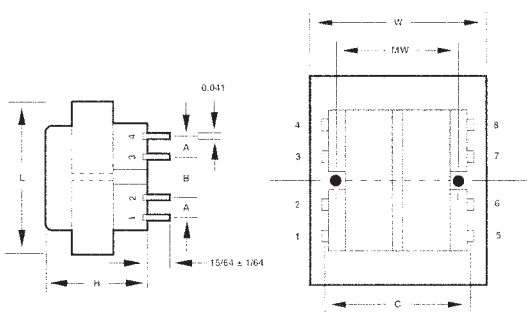
Technical Notes

1. Hi-pot tested at 4,250 VRMS.
2. PC terminal pin spacing for accurate placement.
3. 115 V connect primary in parallel.
230 V connect primary in series.

4. Series Connections: *Primary* - Input 1 & 4
Connect 2 & 3
Secondary - Input 5 & 8
Connect 6 & 7

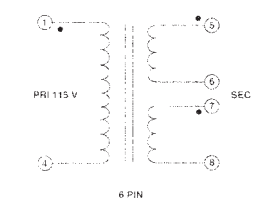
5. Parallel Connections: *Primary* - Input 1 & 2
Connect 1 & 3. 2 & 4
Secondary - Input 5 & 8
Connect 5 & 7, 6 & 8

6. For single primary, omit pins 2 and 3.
7. 1.1 & 2.5 VA are not offered with mounting holes.

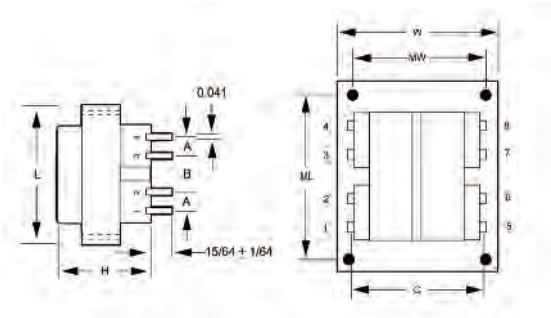


Bottom view

Figure 1

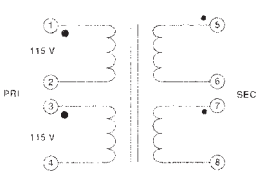


Single Primary



Bottom view

Figure 2



Dual Primary

Power Transformers

UL Recognized
UL File: E53148

Class B

Chassis Mount: Quick Pack™

:: Description

The Triad Quick Pack small power transformer series offers a significant reduction in size and weight for a given VA rating. These transformers are available in six sizes for a wide variety of applications. They are bobbin wound for reduced size and small operating space. Split bobbin nonconcentric winding eliminates costly electrostatic shielding. Termination is suitable for quick connects or soldering.

:: Specifications

Primary: 115 V, 115/230 V, 50/60 Hz
VA Range: 2.4 to 100.0
Output Rating Range: 10.0 V CT to 120.0 V CT

:: Quick Pack

Section	Single Primary 115 V	Dual Primary 115/230 V	VA	Output Rating	Dimensions L	W	H	A	B	ML	Wt. Lbs.
A	F3-10	•	2.4	10.0V CT @ 0.25A	2 1/16	1 3/16	1 3/16	1 3/8	3/16	1 1/4	0.25
	F3-12	•		12.6V CT @ 0.2A							
	F3-16	•		16.0V CT @ 0.15A							
	F3-20	•		20.0V CT @ 0.12A							
	F3-24	•		24.0V CT @ 0.1A							
	F3-28	•		28.0V CT @ 0.085A							
	F3-36	•		36.0V CT @ 0.065A							
	F3-48	•		48.0V CT @ 0.05A							
	F3-56	•		56.0V CT @ 0.045A							
	F3-120	•		120.0V CT @ 0.02A							
B	F4-10	FD4-10	6.0	10.0V CT @ 0.6A	2 3/8	1 1/4	1 3/8	1 11/16	1/16	2	0.44
	F4-12	FD4-12		12.6V CT @ 0.5A							
	F4-16	FD4-16		16.0V CT @ 0.4A							
	F4-20	FD4-20		20.0V CT @ 0.3A							
	F4-24	FD4-24		24.0V CT @ 0.25A							
	F4-28	FD4-28		28.0V CT @ 0.2A							
	F4-36	FD4-36		36.0V CT @ 0.17A							
	F4-48	FD4-48		48.0V CT @ 0.125A							
	F4-56	FD4-56		56.0V CT @ 0.11A							
	F4-120	FD4-120		120.0V CT @ 0.05A							
C	F5-10	FD5-10	12.0	10.0V CT @ 1.2A	2 13/16	1 3/8	1 3/8	1 15/16	3/16	2 3/8	0.70
	F5-12	FD5-12		12.6V CT @ 1.0A							
	F5-16	FD5-16		16.0V CT @ 0.8A							
	F5-20	FD5-20		20.0V CT @ 0.6A							
	F5-24	FD5-24		24.0V CT @ 0.5A							
	F5-28	FD5-28		28.0V CT @ 0.42A							
	F5-36	FD5-36		36.0V CT @ 0.35A							
	F5-48	FD5-48		48.0V CT @ 0.25A							
	F5-56	FD5-56		56.0V CT @ 0.22A							
	F5-120	FD5-120		120.0V CT @ 0.1A							
D	F6-10	FD6-10	30.0	10.0V CT @ 3.0A	3 1/4	1 11/16	1 15/16	2 7/16	1 1/16	2 13/16	1.10
	F6-12	FD6-12		12.6V CT @ 2.5A							
	F6-16	FD6-16		16.0V CT @ 2.0A							
	F6-20	FD6-20		20.0V CT @ 1.5A							
	F6-24	FD6-24		24.0V CT @ 1.25A							
	F6-28	FD6-28		28.0V CT @ 1.1A							
	F6-36	FD6-36		36.0V CT @ 0.85A							
	F6-48	FD6-48		48.0V CT @ 0.63A							
	F6-56	FD6-56		56.0V CT @ 0.54A							
	F6-120	FD6-120		120.0V CT @ 0.25A							
E	F7-10	FD7-10	56.0	10.0V CT @ 5.0A	3 1/16	1 13/16	2 1/4	2 1/16	1 1/16	3 1/8	1.70
	F7-12	FD7-12		12.6V CT @ 4.0A							
	F7-16	FD7-16		16.0V CT @ 3.5A							
	F7-20	FD7-20		20.0V CT @ 2.8A							
	F7-24	FD7-24		24.0V CT @ 2.4A							
	F7-28	FD7-28		28.0V CT @ 2.0A							
	F7-36	FD7-36		36.0V CT @ 1.5A							
	F7-48	FD7-48		48.0V CT @ 1.2A							
	F7-56	FD7-56		56.0V CT @ 1.0A							
	F7-120	FD7-120		120.0V CT @ 0.5A							

CT = Center Tap Mounting hole size: 3/16"

:: Quick Pack continued

Section	Single Primary 115 V	Dual Primary 115/230 V	VA	Output Rating	Dimensions L	W	H	A	B	ML	Wt. Lbs.
A	F8-10	FD8-10	100.0	10.0V CT @10.0A	4 1/32	2 1/4	2 9/16	3 1/16	1 1/16	3 9/16	2.75
	F8-12	FD8-12		12.6V CT @ 8.0A							
	F8-16	FD8-16		16.0V CT @ 6.25A							
	F8-20	FD8-20		20.0V CT @ 5.0A							
	F8-24	FD8-24		24.0V CT @ 4.0A							
	F8-28	FD8-28		28.0V CT @ 3.6A							
	F8-36	FD8-36		36.0V CT @ 2.8A							
	F8-48	FD8-48		48.0V CT @ 2.0A							
	F8-56	FD8-56		56.0V CT @ 1.8A							
	F8-120	FD8-120		120.0V CT @ 0.85A							

CT = Center Tap *Mounting hole size: 3/16"*

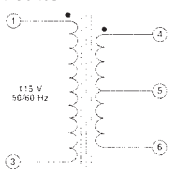
:: Outline Dimensions

Technical Notes

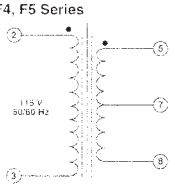
1. Hi-pot tested at 2,500 VRMS.
2. Class B insulation for maxumim temperature of 130ºC.
3. Terminal size is .187" x .021".

Single Primary

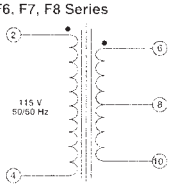
F3 Series



F4, F5 Series

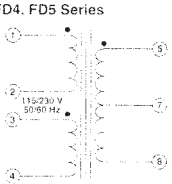


F6, F7, F8 Series

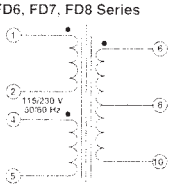


Dual Primary

FD4, FD5 Series



FD6, FD7, FD8 Series

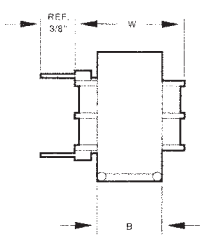


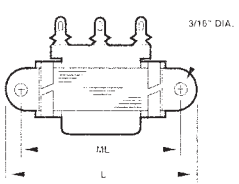
Series 230 V: Input 1 & 4
Connect 2 & 3

Parallel 115 V: Input 1 & 2
Connect 1 & 3, 2 & 4

Series 230 V: Input 1 & 5
Connect 2 & 4

Parallel 115 V: Input 1 & 2
Connect 1 & 4, 2 & 5





Power Transformers

PC Mount


Figure A

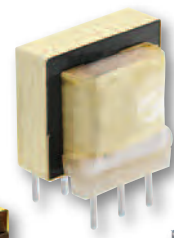


Figure B

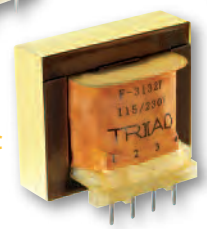


Figure C


Figure D

:: Description

Triad power transformers are offered in a wide selection of plug-in types to meet the needs of PC board and solid state power supply designs. These transformers can satisfy power as well as control and instrumentation applications. The transformers are available in single or dual primary and dual center tapped secondary configurations.

:: Specifications

Primary: 115 V, 50/60 Hz

:: Single Primary, Dual Secondaries

Section	Type No.	Figure	VA	Secondary Series	Secondary Parallel	Dimensions H	W	D	L	A	B	MW	Wt. Oz.
A	F-131P F-139P F-132P F-150P F-138P F-133P F-160P F-137P F-134P F-135P F-136P	B	1½	8.0V CT @ 0.188A 12.6V CT @ 0.12A 15.0V CT @ 0.100A 17.0V CT @ 0.085A 25.2V CT @ 0.06A 30.0V CT @ 0.050A 34.0V CT @ 0.045A 40.0V CT @ 0.038A 54.0V CT @ 0.028A 76.0V CT @ 0.020A 116.0V CT @ 0.013A	4.0V @ 0.376A 6.3V @ 0.24A 7.5V @ 0.200A 8.5V @ 0.170A 12.6V @ 0.12A 15.0V @ 0.100A 17.0V @ 0.090A 20.0V @ 0.076A 27.0V @ 0.056A 38.0V @ 0.040A 58.0V @ 0.026A	1 11/16	•	1 3/32	1 25/64	5/16	1	•	3.5
B	F-141XP F-149XP F-142XP F-161XP F-148XP F-143XP F-162XP F-147XP F-144XP F-145XP F-146XP	A	4½	8.0V CT @ 0.562A 12.6V CT @ 0.35A 15.0V CT @ 0.300A 17.0V CT @ 0.264A 25.2V CT @ 0.178A 30.0V CT @ 0.150A 34.0V CT @ 0.132A 40.0V CT @ 0.112A 54.0V CT @ 0.084A 76.0V CT @ 0.060A 116.0V CT @ 0.033A	4.0V @ 1.124A 6.3V @ 0.70A 7.5V @ 0.600A 8.5V @ 0.528A 12.6V @ 0.356A 15.0V @ 0.300A 17.0V @ 0.264A 20.0V @ 0.224A 27.0V @ 0.168A 38.0V @ 0.120A 58.0V @ 0.066A	1 1/16	2 3/8	1 1/4	1 45/64	13/32	1 3/32	2	7.5
C	F-151XP F-159XP F-152XP F-163XP F-158XP F-153XP F-164XP F-157XP F-154XP F-155XP F-156XP	A	7½	8.0V CT @ 0.940A 12.6V CT @ 0.60A 15.0V CT @ 0.500A 17.0V CT @ 0.441A 25.2V CT @ 0.30A 30.0V CT @ 0.250A 34.0V CT @ 0.220A 40.0V CT @ 0.188A 54.0V CT @ 0.140A 76.0V CT @ 0.100A 116.0V CT @ 0.085A	4.0V @ 1.88A 6.3V @ 1.2A 7.5V @ 1.000A 8.5V @ 0.882A 12.6V @ 0.60A 15.0V @ 0.500A 17.0V @ 0.440A 20.0V @ 0.376A 27.0V @ 0.280A 38.0V @ 0.200A 58.0V @ 0.130A	1 1/8	2 13/16	1 15/32	1 61/64	13/32	1 1/16	2 1/8	10.5

CT = Center Tap Mounting hole size: Figure A = 3/16"

:: 115 Volts, 50/60 Hz Primary/Triple Output Secondaries for ±15 VDC and +5 VDC

Section	Type No.	Figure	VA	Secondary No. 1	Secondary No. 2	Dimensions H	W	D	L	A	B	MW	Wt. Oz.
D	F-165P F-167P	C	1½	24.0V CT @ 0.025A 32.0V CT @ 0.020A	9.0VCT @ 0.100A 15.0V CT @ 0.060A	1 1/16	1 25/64	1 3/32	1 25/64	13/64	1	•	3.5
E	F-168XP	D	4½	32.0V CT @ 0.050A	15.0V CT @ 0.195A	1 1/16	2 3/8	1 1/4	1 49/64	1/4	1 3/32	2	7.5
F	F-166XP F-169XP	D	7½	24.0V CT @ 0.125A 32.0V CT @ 0.100A	9.0V CT @ 0.500A 15.0V CT @ 0.287A	1 1/8	2 13/16	1 15/32	1 61/64	1/4	1 1/16	2 1/8	10.5

CT = Center Tap Mounting hole size: Figure A = 3/16"

:: Outline Dimensions

Technical Notes

1. Hi-pot tested at 1,500 VRMS.

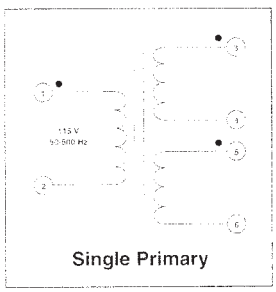
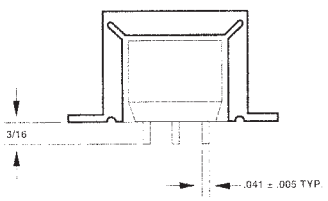


Figure A



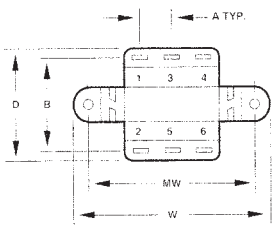
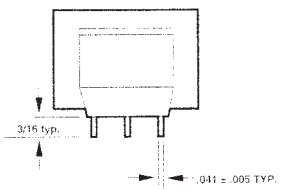


Figure B



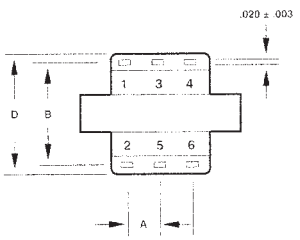
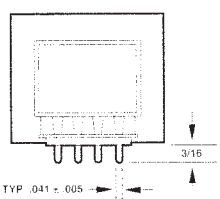
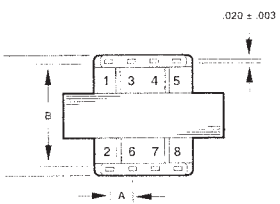


Figure C





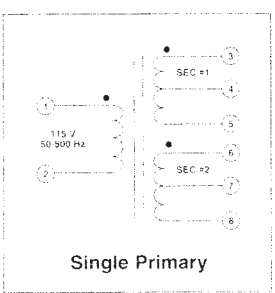
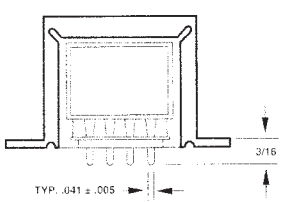
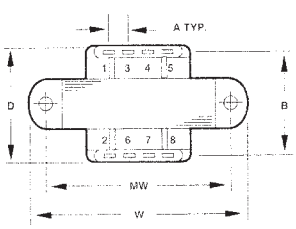


Figure D





Power Transformers

PC Mount

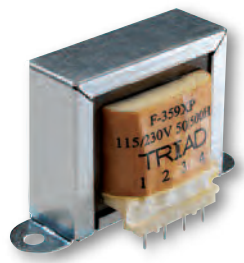


Figure A

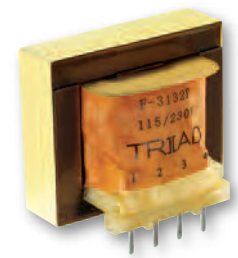


Figure B

:: Description

Triad power transformers are offered in a wide selection of plug-in types to meet the needs of PC board and solid state power supply designs. These transformers can satisfy power as well as control and instrumentation applications. The transformers are available in a single or dual primary and dual center tapped secondary configurations.

:: Specifications

Primary: 115/230 V, 50/60 Hz

:: Dual Primary, Dual Secondaries

Section	Type No.	Figure	VA	Secondary		Dimensions							Wt. Oz.
				Series	Parallel	H	W	D	L	A	B	MW	
A	F-3132P F-333P F-367P	B	1½	15.0V CT @ 0.1A 30.0V CT @ 0.050A 230.0V CT @ 0.0065A	7.5V @ 0.2A 15.0V @ 0.100A 115.0V @ 0.013A	1 3/16	•	1 1/8	•	13/64	1	•	4.0
B	F-348XP	A	4½	12.6V CT @ 0.350A	6.3V @ 0.700A	1 1/8	2 3/8	1 1/4	1 3/8	1/4	1 7/64	2	6.5
C	F-3142XP F-349XP F-350XP F-358XP F-3143XP F-363XP	A	4½	15.0V CT @ 0.3A 16.0V CT @ 0.280A 24.0V CT @ 0.180A 20.0V CT @ 0.225A 30.0V CT @ 0.15A 230.0V CT @ 0.020A	7.5V @ 0.6A 8.0V @ 0.560A 12.0V @ 0.360A 10.0V @ 0.450A 15.0V @ 0.3A 115.0V @ 0.040A	1 7/16	2 3/8	1 1/4	1 3/8	1/4	1 7/64	2	6.5
D	F-3152XP F-3153XP	A	7½	15.0V CT @ 0.5A 30.0V CT @ 0.25A	7.5V @ 1.0A 15.0V @ 0.5A	1 3/8	2 13/16	1 7/16	1 7/8	1/4	1 5/16	2 3/8	11.0
E	F-359XP F-362XP F-365XP F-366XP F-369XP	A	10	24.0V CT @ 0.450A 20.0V CT @ 0.500A 12.6V CT @ 0.800A 16.0V CT @ 0.640A 230.0V CT @ 0.044A	12.0V @ 0.900A 10.0V @ 1.0A 6.30V @ 1.6A 8.0V @ 1.28A 115.0V @ 0.088A	1 3/8	2 13/16	1 7/16	1 7/8	1/4	1 5/16	2 3/8	11.0
F	F-370P F-371P F-372P F-373P F-374P F-375P F-376P F-377P F-378P F-379P	B	24	10.0V CT @ 2.4A 12.6V CT @ 2.0A 16.0V CT @ 1.5A 20.0V CT @ 1.2A 24.0V CT @ 1.0A 28.0V CT @ 0.8A 34.0V CT @ 0.7A 40.0V CT @ 0.6A 56.0V CT @ 0.42A 120.0V CT @ 0.2A	5.0V @ 4.8A 6.3V @ 4.0A 8.0V @ 3.0A 10.0V @ 2.4A 12.0V @ 2.0A 14.0V @ 1.6A 17.0V @ 1.4A 20.0V @ 1.2A 28.0V @ 0.84A 60.0V @ 0.4A	1 3/8	•	2 1/4	1 3/8	1/4	2 7/64	•	13.3

CT = Center Tap Mounting hole size: Figure A = 3/16"

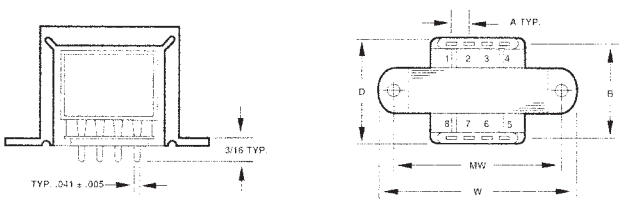
:: Outline Dimensions

Technical Notes

1. The transformers with dual primaries permit their use in equipment for sale in both foreign and domestic markets.

2. Hi-pot tested at 1,500 VRMS.

Figure A



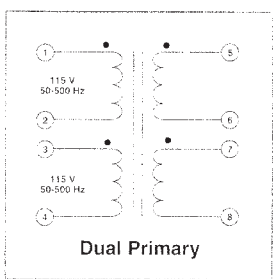
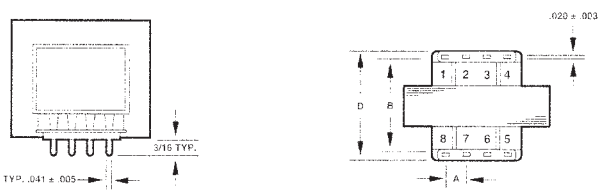


Figure B



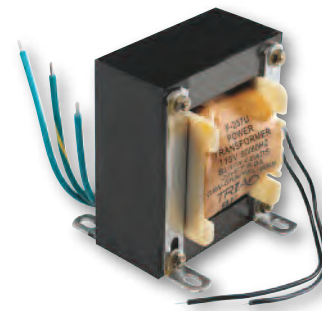
Triad Magnetics can be your total transformer source. Our flexible production lines are just as capable of handling a component order from 500 to 500,000. Call your Triad distributor for details.

Power Transformers

Chassis Mount: Single Secondary

Case Type X

Case Type A



Case Type U

:: Description

Triad offers a full choice of power supply transformers for direct use or in transformer, rectifier, or filter circuits. Other available secondary voltages include control, filament and low level signaling in standard values. The transformers are single primary with single and multiple secondaries in standard size and weight configurations.

:: Specifications

Primary: 115/230 V, 50/60 Hz

:: Single Secondary

Section	Type No.	Secondary Volts	Amps	Primary Voltage	RMS Test Voltage (Sec.)	Case Type	Connections	Dimensions H	W	D	Mounting Dimensions MW	MD	Wt. Lbs.
A	F-1X#	2.5 CT	3.0	115	1,500	X	Leads	1⅜	2 13/16	1⅜	2⅜	•	0.68
	F-301X	2.5 CT	3.0	115/230	1,500	X	Leads	1⅜	2 13/16	1⅜	2⅜	•	0.68
	F-6X#	2.5 CT	6.0	115	2,500	X	Leads	1 15/16	3 3/16	1¼	2 13/16	•	1.00
	F-3X#	2.5 CT	10.0	115	3,000	X	Leads	2 3/32	3¾	2⅛	3⅛	•	1.70
B	F-7X	5.0 CT	3.0	115	1,500	X	Leads	1 15/16	3 3/16	2	2 13/16	•	1.30
	F-8X	5.0 CT	6.0	115	1,500	X	Leads	2 3/32	3¾	2⅛	3⅛	•	1.70
	F-12X	5.0 CT	8.0	115	2,500	X	Leads	2 19/32	4	2¼	3 9/16	•	2.50
C	F-13X	6.3	0.6	115	1,500	X	Leads	1⅜	2⅜	1⅜	2	•	0.37
	F-313X	6.3	0.6	115/230	1,500	X	Leads	1⅜	2⅜	1⅜	2	•	0.37
	F-14X#	6.3 CT	1.2	115	2,500	X	Leads	1⅜	2 13/16	1⅜	2⅜	•	0.70
	F-314X	6.3 CT	1.2	115/230	2,500	X	Leads	1⅜	2 13/16	1⅜	2⅜	•	0.70
	F-16X	6.3 CT	3.0	115	2,500	X	Leads	1 15/16	3 3/16	2	2 13/16	•	1.30
	F-316X	6.3 CT	3.0	115/230	2,500	X	Leads	1 15/16	3 3/16	2	2 13/16	•	1.30
	F-43X#	6.3	4.0	115	1,500	X	Leads	1 15/16	3 3/16	2	2 13/16	•	1.25
	F-18X	6.3 CT	6.0	115	1,500	X	Leads	2 19/32	4	2¼	3 9/16	•	2.30
	F-318X	6.3 CT	6.0	115/230	1,500	X	Leads	2 3/32	4	2¼	3 9/16	•	2.30
	F-69X	6.3 CT	8.0	115	1,500	X	Leads	2 3/32	4	2¼	3 9/16	•	2.30
	F-21A	6.3 CT	10.0	115	1,500	A	1-Leads	3 9/32	2 13/32	3⅛	2¼	2	3.80
	F-22A	6.3 CT	20.0	115	2,000	A	2-Leads	3⅞	3 9/32	4⅛	2½	3	7.00
D	F-28U†	7.5 CT or 6.3 CT	25.0	115	3,000	U	Leads & Lugs	4⅞	3 13/16	3⅝	3	3 1/16	7.50
E	F-180X	10.0 CT	1.0	115	1,500	X	Leads	1 15/16	3 3/16	1¼	2 13/16	•	0.90
	F-31X	10.0 CT	3.0	115	2,000	X	Leads	2 3/32	3¾	2⅛	3⅛	•	1.70
F	F-96U	10.0 CT	6.000	115	1,500	U	Leads	3	2½	2¾	2	2 5/16	2.10
	F-97U	10.0 CT	8.000	115	1,500	U	Leads	3 7/16	2 13/16	3	2¼	2½	4.00
G	F-113X	12.0	0.150	115	1,500	X	Leads	1⅜	2⅜	1⅜	2	•	0.40
	F-216X#	12.0	0.350	115	1,500	X	Leads	1⅜	2⅜	1⅜	2	•	0.37
	F-114X	12.0	0.700	115	1,500	X	Leads	1⅜	2 13/16	1⅜	2⅜	•	0.80
	F-217X#	12.0	1.200	115	1,500	X	Leads	2	3¼	1¼	2 13/16	•	1.00
	F-218X#	12.0	2.000	115	1,500	X	Leads	2	3¼	1⅞	2⅞	•	1.13
	F-219X#	12.0	4.000	115	1,500	X	Leads	2 5/16	4	2¼	3 9/16	•	2.30
	F-220U#	12.0	6.000	115	1,500	U	Leads	3 7/16	2 13/16	2½	2¼	2⅛	3.50
	F-221U#	12.0	8.000	115	1,500	U	Leads	3 13/16	3⅛	2⅝	2½	2⅛	4.00
H	F-29U†	12.0 CT or 11.0 CT or 10.0 CT	11.0	115	3,000	U	Leads	4⅞	3½	3⅜	2¾	2 5/16	6.50

 # 60 Hz †Tapped primary to produce lower voltages CT = Center Tap Mounting hole sizes: X = 3/16" U = 13/64 x 3/8" A = 3/8 x 9/16"

:: Single Secondary continued

Section	Type No.	Secondary Volts	Secondary Amps	Primary Voltage	RMS Test Voltage (Sec.)	Case Type	Connections	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
I	F-70X	12.6 CT	1.000	115	1,500	X	Leads	1 5/16	3 5/16	1 1/4	2 1/16	•	1.30
	F-25X	12.6 CT	1.500	115	1,500	X	Leads	1 5/16	3 5/16	2	2 1/16	•	1.30
	F-325X	12.6 CT	1.500	115/230	1,500	X	Leads	1 5/16	3 5/16	2	2 1/16	•	1.30
	F-44X#	12.6 CT	2.000	115	1,500	X	Leads	1 5/16	3 5/16	2	2 1/16	•	1.25
	F-344X	12.6 CT	2.000	115/230	1,500	X	Leads	1 5/16	3 5/16	2	2 1/16	•	1.25
	F-26X#	12.6 CT	2.500	115	1,500	X	Leads	2 9/32	3 11/16	2	3 1/8	•	1.55
	F-326X	12.6 CT	2.500	115/230	1,500	X	Leads	2 9/32	3 11/16	2	3 1/8	•	1.55
	F-224X#	12.6	3.000	115	1,500	X	Leads	2 1/4	3 1/4	2 1/8	3 1/8	•	1.60
	F-225X#	12.6	4.000	115	1,500	X	Leads	2 5/8	4	2 1/16	3 9/16	•	2.30
	F-3181U	12.6 CT	4.000	115/230	1,500	U	Leads	3 9/16	2 9/16	2 9/16	2	2	2.30
	F-182U	12.6 CT	6.000	115	1,500	U	Leads	3 5/8	2 13/16	1 7/16	2 1/4	2 5/8	3.80
	F-183U	12.6 CT	8.000	115	1,500	U	Leads	3 13/16	3 5/16	2 13/16	2 1/2	2 1/4	5.00
J	F-112X	14.0 CT	0.250	115	1,500	X	Leads	1 5/8	2 5/8	1 1/8	2	•	0.40
	F-3112X	14.0 CT	0.250	115/230	1,500	X	Leads	1 5/8	2 5/8	1 1/2	2	•	0.30
	F-250X	14.0 CT	1.000	115	1,500	X	leads	1 5/16	3 1/4	1 1/4	2 1/16	•	1.20
	F-251X	14.0 CT	2.000	115	1,500	X	Leads	2 1/4	3 11/16	1 15/16	3 1/8	•	1.50
	F-252U	14.0 CT	4.000	115	1,500	U	Leads	3	2 1/2	2 7/16	2	2 1/4	3.00
	F-253U	14.0 CT	6.000	115	1,500	U	Leads	3 5/8	2 13/16	2 5/8	2 1/4	2 5/8	4.00
K	F-254X	20.0 CT	1.000	115	1,500	X	Leads	2 1/4	3 11/16	1 15/16	3 1/8	•	1.50
	F-255X	20.0 CT	2.000	115	1,500	X	Leads	2 9/16	4	2 1/4	3 9/16	•	2.50
	F-256U	20.0 CT	4.000	115	1,500	U	Leads	3 5/8	2 13/16	2 5/8	2 5/8	•	4.00
	F-257U	20.0 CT	6.000	115	1,500	U	Leads	3 3/4	3 1/8	3 1/8	2 1/2	2 5/8	5.70
	F-258U	20.0 CT	8.000	115	1,500	U	Leads	3 3/4	3 1/8	3 1/2	2 1/2	2 5/8	6.40
	F-259U	20.0 CT	10.000	115	1,500	U	Leads	4 1/8	3 7/16	3 1/2	2 3/4	2 3/4	7.40
L	F-115X	24.0 CT	0.085	115	1,500	X	Leads	1 1/16	2 1/16	1 1/8	1 1/4	•	0.30
	F-3115X	24.0 CT	0.085	115/230	1,500	X	Leads	1 1/16	2 1/16	1 1/8	1 1/4	•	0.30
	F-116X	24.0 CT	0.200	115	1,500	X	Leads	1 5/8	2 5/8	1 1/2	2	•	0.45
	F-3116X	24.0 CT	0.200	115/230	1,500	X	Leads	1 5/8	2 5/8	1 1/2	2	•	0.45
	F-117X	24.0 CT	0.400	115	1,500	X	Leads	1 5/8	2 13/16	1 5/8	2 3/8	•	0.80
	F-3117X	24.0 CT	0.400	115/230	1,500	X	Leads	1 5/8	2 13/16	1 1/2	2 3/8	•	0.75
	F-118X	24.0 CT	0.700	115	1,500	X	Leads	2	3 1/4	2	2 13/16	•	1.30
	F-3118X	24.0 CT	0.700	115/230	1,500	X	Leads	2	3 1/4	2	2 13/16	•	1.30
	F-45X#	24.0 CT	1.000	115	1,500	X	Leads	1 15/16	3 5/16	2	2 13/16	•	1.30
	F-345X	24.0 CT	1.000	115/230	1,500	X	Leads	1 15/16	3 5/16	2	2 13/16	•	1.30
	F-46X#	24.0	1.000	115	1,500	X	Leads	1 15/16	3 1/4	2 1/8	2 13/16	•	1.40
	F-229X#	24.0	2.000	115	1,500	X	Leads	2 9/16	4	2	3 9/16	•	2.30
	F-192X	24.0 CT	2.000	115	1,500	X	Leads	2 19/32	4	2 1/4	3 9/16	•	2.30
	F-193U	24.0 CT	4.000	115	1,500	U	Leads	2 13/16	3 1/8	2 13/16	2 1/2	2 5/8	4.00
	F-260U	24.0 CT	6.000	115	1,500	U	Leads	3 3/4	3 1/8	3 1/2	2 1/2	2 5/8	6.40
	F-261U	24.0 CT	8.000	115	1,500	U	Leads	4 1/8	3 7/16	3 1/2	2 3/4	2 3/4	7.40
	F-401U	24.0 CT	10.000	115	1,500	U	Leads	4 1/8	3 7/16	3 3/4	2 3/4	3	8.00
	F-226U#	24.0 CT	12.000	115	1,500	U	Leads	4 9/16	3 3/4	4 1/8	3	3 1/4	10.40
	F-1000U	24.0 CT	21.000	115/230	1,500	U	Leads	5 1/4	4 1/8	3 1/2	3 1/2	2 3/4	~14.00
M	F-57X	25.2 CT	1.000	117	1,500	X	Leads	1 5/16	3 9/16	2	2 13/16	•	1.50
	F-357X	25.2 CT	1.000	115/230	1,500	X	Leads	1 5/16	3 9/16	2	2 13/16	•	1.50
	F-41X#	25.2 CT	2.000	115	1,500	X	Leads	2 9/32	4	2 1/4	3 9/16	•	2.20
	F-341X	25.2 CT	2.000	115/230	1,500	X	Leads	2 19/32	4	2 1/4	3 9/16	•	2.20
	F-56X	25.2 CT	2.800	115	1,500	X	Leads	2 21/32	4	2 1/4	3 9/16	•	2.50
N	F-119X	26.8 CT	0.150	115	1,500	X	Leads	1 5/8	2 5/8	1 1/2	2	•	0.45
	F-40X#	26.8 CT	1.000	115	1,500	X	Leads	1 5/16	3 5/16	2	2 13/16	•	1.30
	F-340X	26.8 CT	1.000	115/230	1,500	X	Leads	1 5/16	3 5/16	2	2 13/16	•	1.30
	F-55X	26.8 CT	1.700	115	1,500	X	Leads	2 19/32	4	2 1/4	3 9/16	•	2.30
	F-355X	26.8 CT	1.700	115/230	1,500	X	Leads	2 19/32	4	2 1/4	3 9/16	•	2.30
O	F-122X	28.0 CT	0.175	115	1,500	X	Leads	1 5/8	2 5/8	1 1/2	2	•	0.35
	F-124X	28.0 CT	0.800	115	1,500	X	Leads	1 5/16	3 1/4	2	2 13/16	•	1.00
	F-184X	28.0 CT	1.000	115	1,500	X	Leads	2 5/16	3 11/16	2 1/4	3 1/8	•	1.40
	F-3185U	28.0 CT	2.000	115/230	1,500	U	Leads	3 9/16	2 1/2	2 7/16	2	2 1/4	2.90
	F-187U	28.0 CT	4.000	115	1,500	U	Leads	3 1/2	2 7/8	3 9/16	2 1/4	2 1/4	5.30
P	F-188X	35.0 CT	0.100	115	1,500	X	Leads	1 5/8	2 13/16	1 7/16	2 3/8	•	0.35
	F-228X#	35.0 CT	0.300	115	1,500	X	Leads	1 5/8	2 13/16	1 5/8	2 3/8	•	0.60
	F-189X	35.0 CT	0.500	115	1,500	X	Leads	2 5/16	3 11/16	1 15/16	3 1/8	•	1.00
	F-54X	35.0 CT	1.500	115	1,500	X	Leads	2 19/32	4	2 1/4	3 9/16	•	2.20
	F-354X	35.0 CT	1.500	115/230	1,500	X	Leads	2 19/32	4	2 1/4	3 9/16	•	2.20
	F-191U	35.0 CT	4.000	115	1,500	U	Leads	3 13/16	3 5/16	3 3/16	2 3/4	2 1/2	6.00
	F-268U	35.0 CT	8.000	115	1,500	U	Leads	4 1/2	3 3/4	4 1/4	3	3 1/4	11.00

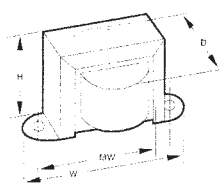
 # 60 Hz †Tapped primary to produce lower voltages CT = Center Tap Mounting hole sizes: U = 13/64 x 3/8" X = 3/16"

:: Single Secondary continued

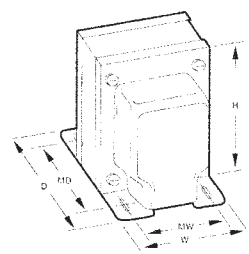
Section	Type No.	Secondary Volts	Secondary Amps	Primary Voltage	RMS Test Voltage (Sec.)	Not enough room Case Type	Connections	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
Q	**F-270X**	40.0 CT	1.000	115	1,500	X	Leads	2 9/16	4	2 1/4	3 5/16	•	2.60
	F-271U	40.0 CT	2.000	115	1,500	U	Leads	3 3/8	2 13/16	2 7/8	2 1/4	2 5/8	4.00
	F-272U	40.0 CT	4.000	115	1,500	U	Leads	3 3/4	3 1/8	3 1/2	2 1/2	2 7/8	6.40
	F-273U	40.0 CT	6.000	115	1,500	U	Leads	4 1/2	3 3/4	4	3	3	10.00
	F-275U	40.0 CT	10.000	115	1,500	U	Leads	5 3/8	4 3/8	4 1/2	3 1/2	3 3/8	14.50
R	**F-59X**	60.0 CT	0.400	115	1,500	X	Leads	1 5/16	3 5/16	2	2 5/16	•	1.30
	F-279U	60.0 CT	1.000	115	1,500	U	Leads	3	2 1/2	2 5/8	2	2 5/8	3.40
	F-280U	60.0 CT	2.000	115	1,500	U	Leads	3 1/4	3 1/8	3 1/8	2 1/2	2 5/8	5.60
	F-282U	60.0 CT	6.000	115	1,500	U	Leads	5 1/4	4 3/8	4 1/8	3 1/2	2 7/8	12.50

 # 60 Hz CT = Center Tap Mounting hole sizes: X = 3/16" U = 13/64 x 3/8"

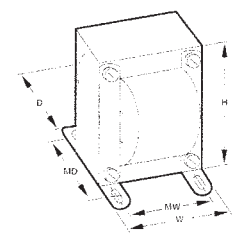
:: Outline Dimensions



Case Type X



Case Type A

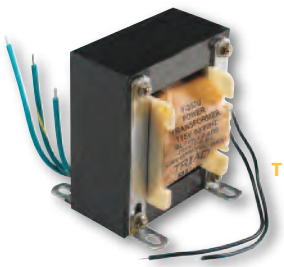


Case Type U

Power Transformers

Chassis Mount: Multiple Secondary


Case Type X


Case Type U

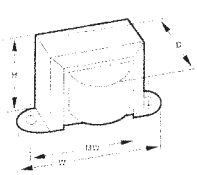

Case Type Z

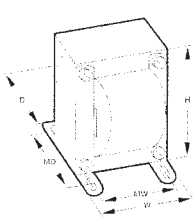
:: Multiple Secondary

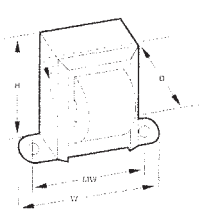
Section	Type No.	Secondary Volts	Secondary Amps	Primary Voltage	RMS Test Voltage (Sec.)	Case Type	Connections	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
A	F-235Z#	12.0 CT	0.250	115	1,500	Z	Lugs	2	2 3/8	1 7/16	2	•	0.6
		12.0 CT	0.250										
	F-236Z#	12.0 CT	0.500	115	1,500	Z	Lugs	2 5/16	2 7/8	1 5/8	2 3/8	•	0.9
		12.0 CT	0.500										
	F-237Z#	12.0 CT	1.000	115	1,500	Z	Lugs	2 3/8	2 13/16	2 1/16	2 3/8	•	1.1
		12.0 CT	1.000										
B	F-241U#*f*	18.0 CT	1.000	115	1,500	U	Lugs	2 1/2	3	2 1/2	2 1/2	2	2.2
		18.0 CT	1.000										
	F-243U#*f*	18.0 CT	4.000	115	1,500	U	Lugs	3 1/2	4 1/8	3 1/4	3 7/16	2 1/4	5.2
		18.0 CT	4.000										
	F-244U#*f*	18.0 CT	8.000	115	1,500	U	Lugs	3 3/4	4 1/2	4	3 3/4	2 3/4	8.3
		18.0 CT	8.000										
C	F-195X	32.0 CT	0.250	115	1,500	X	Leads	2 1/4	3 1/4	1 7/8	3 1/8	•	1.3
		15.5 CT	0.750										
D	F-196U	32.0 CT	1.000	115	1,500	U	Leads	3 1/8	2 13/16	2 3/8	2 1/4	2 1/4	4.0
		15.5 CT	2.000										
E	F-197U	32.0 CT	1.000	115	1,500	U	Leads	3 1/4	3 1/8	2 5/16	2 1/2	2 1/4	4.7
		15.0 CT	4.0										
F	F-198U	32.0 CT	1.000	115	1,500	U	Leads	3 1/4	3 1/8	3 3/16	2 1/2	2 3/4	6.2
		15.0 CT	6.000										

f Wingdings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3 V windings @ 2A in series would be 12.6 V @ 2A. Wingdings may also be connected in parallel to obtain combined current. Example: Two 6.3 V windings @ 2A in parallel would be 6.3 V @ 4A. # 60 Hz CT = Center Tap Mounting hole sizes X = 3/16" U = 13/64 x 3/8" Z = 3/16"

:: Outline Dimensions

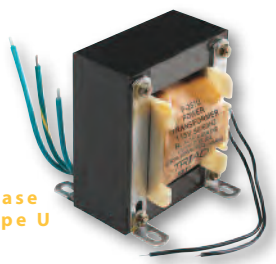

Case Type X


Case Type U


Case Type Z

Power Transformers

Chassis Mount: Universal


Case Type U


Case Type A


Case Type X

:: Description

Triad chassis mount power transformers provide maximum performance when integrated into full wave center tap or bridge type circuits with silicon or selenium rectifiers. The secondary voltages are selected by primary taps. The secondaries of the Series F-90 transformers may be connected to provide a wide variety of output voltages (see Technical Notes). The Series F-90 transformers are designed for use with silicon diode rectifiers to supply the DC voltages for transistors in their various applications. They are intended for use with full wave center tap or bridge rectifiers, but may be used with voltage doubler circuits at one-half of the rated current.

:: Specifications

Primary: 115 V, 230 V, 50/60 Hz
Secondary AC: F-90 Series - 14 to 40 (FWCT)
F-90 Series - 7 to 30 (FWB)

:: Universal Secondaries

Section	Type No.	Primary Voltage	Secondary AC Volts	Secondary AC Amps	Case Type	Connections	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. lbs.
A	**F-360U**	115/230	0-6.5/13/19.5/26	3.0	U	Leads	3⅜	2 13/16	2⅝	2¼	2 1/16	3.50
B	**F-361U**	115/230	0-24/27/30/33/36	3.0	U	Leads	3¾	3⅜	3¼	2½	2⅝	5.65

Mounting hole sizes: U = 13/64 x ⅜"

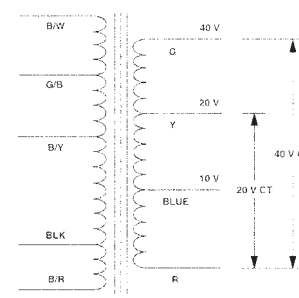
:: Universal, 115 Volts

Section	Type No.	Primary Volts	Secondary AC Volts	Secondary AC *DC Amps	Case Type	Connections	Case Dimensions H	Case Dimensions W	Case Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
C	F-94X	115†	10-20 CT-40 CT	0.035	X	Leads	1⅛	2⅛	1⅛	2	•	0.50
D	F-90X	115†	10-20 CT-40 CT	0.1	X	Leads	1⅛	2 1/16	1⅛	2⅛	•	0.70
E	F-91X	115†	10-20 CT-40 CT	0.3	X	Leads	2 3/32	3 11/16	2	3⅜	•	1.50
F	F-93X	115†	10-20 CT-40 CT	0.75	X	Leads	2 19/32	4	2¼	3 9/16	•	2.40
G	F-92A	115†	10-20 CT-40 CT	1.0	A	Leads	3 7/16	2 21/32	3	2	2 1/16	3.25

†Tapped primary to produce lower voltages CT = Center Tap Mounting hole sizes: X = 3/16" A = ⅜ x 13/64"
See Technical Notes below for voltages selected by various combinations of primary tap interconnections.
**DC amp rating with a full wave bridge rectifier hi-pot tested at 1,500 VRMS*

Technical Notes

Primary 115 Volts Lead	Lead	Secondary Leads	Green Red	Leads	Green Blue	Leads	Yellow Red	Leads	Blue Red
Black/Yellow	Black	40V CT Yellow		30.0V		20V CT Blue		10.0V	
Black/Yellow	Black/Red	38V CT Yellow		28.5V		19V CT Blue		9.5V	
Black/Green	Black	34V CT Yellow		25.5V		17V CT Blue		8.5V	
Black/Green	Black/Red	32V CT Yellow		24.0V		16V CT Blue		8.0V	
Black/White	Black	30V CT Yellow		22.5V		15V CT Blue		7.5V	
Black/White	Black/Red	28V CT Yellow		21.0V		14V CT Blue		7.0V	



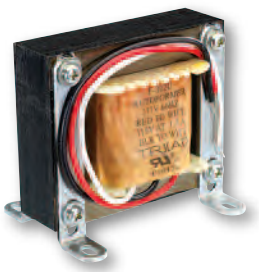
F-90 Series

Power Transformers

Autotransformers

Case Type X

Case Type M



Case Type U

:: Description

Triad autotransformers are single winding transformers in which the primary coil is a fraction of the entire winding for voltage step-up or the secondary coil is a fraction of the entire winding for voltage step-down (see Technical Notes for an equivalent circuit diagram). In ordinary double wound power transformers, the primary and secondary are isolated and all the power is transferred by induction. In autotransformers, part of the power is transferred conductively through the windings. Triad autotransformers come in a variety of configurations, case types and output watts (VA) ratings in excess of 2,000 watts. A universal isolation/autotransformer/voltage control model is available with up to a 4,000 output watts rating when operated as an autotransformer.

:: Specifications

See Technical Notes

:: Step-Up/Step-Down Autotransformers

Section	Part No.	VA	Primary Voltage	Secondary Volts ±5%	Secondary RMS Amps	Case Type	Connections	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
A	**N-1X**	50	230	115	0.435	X (1)	Leads	2 9/32	3 11/16	2	3 1/8	•	1.50
B	**N-3MGA∆**	85	230	115	0.74	M (3)	6' Cord, Plug & Socket	3 19/32	2 31/32	3 1/2	2 1/4	2 5/8	3.00
C	**N-2X**	100	230	115	0.87	X (1)	Leads	2 5/8	4	2 1/16	3 5/8	•	2.10
D	**N-150MG**	150	115	230	0.65	M (3)	6'-3 Wire Cord, Plug & Socket	3 19/32	2 31/32	3 5/16	2 1/4	2 1/8	4.90
	F-302U#	150	277	115	1.30	U (2)	Leads	2 13/16	3 3/8	2 1/4	2 13/16	2	2.90
	N-4MG∆	150	230	115	1.30	M (3)	6' Cord, Plug & Socket	3 19/32	2 31/32	4 1/4	2 1/4	2 7/8	4.70
E	**N-6U**	200	230	115	1.70	U (2)	Leads	3 3/8	2 13/16	2 13/16	2 1/4	2 1/4	3.60
F	**N-250MG∆**	250	115	230	1.10	M (3)	6'-3 Wire Cord, Plug & Socket	3 7/8	3 1/4	3 11/16	2 1/2	2 7/16	6.60
G	**N-5MG∆**	250	230	115	2.17	M (3)	6' Cord, Plug & Socket	3 7/8	3 9/32	4 13/16	2 1/2	3 1/2	7.00
H	**N-500MG∆**	500	115	230	2.20	M (3)	6'-3 Wire Cord, Plug & Socket	4 3/8	3 7/8	4 3/4	3	3 5/8	11.20
I	**N-7MG∆**	600	230	115	5.22	M (3)	6' Cord, Plug & Socket	4 3/8	3 15/16	5	3	3 7/8	12.00
J	**N-1000MG∆**	1,000	115	230	4.35	M (4)	6'-3 Wire Cord, Plug & Socket	5 3/8	4 1/2	5 1/2	3 1/2	4 1/8	17.39
K	**N-9MG∆**	1,250	230	115	10.85	M (4)	6' Cord, Plug & Socket	5 5/16	4 1/2	6	3 1/2	4 1/2	21.00
L	**N-11MG∆**	2,000	230	115	17.40	M (4)	6' Cord, Plug & Socket	5 3/8	4 1/2	8 1/4	3 1/2	6 7/8	33.25

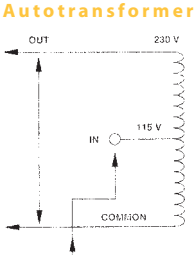
∆ Has 3-wire plug, cord and socket # 60 Hz Mounting hole sizes: (1) = 7/16" (2) = 13/64 x 3/8" (3) = 3/8 x 7/16"

:: Outline Dimensions

Technical Notes

1. Output wattage (VA) ratings 50 to 2,000 W.
2. Wide selection of case types, including 6' line cords, plugs, sockets and lugs.
3. All transformers are 50/60 Hz line frequency, except as noted.
4. Hi-pot tested at 1,500 VRMS.

Autotransformer



(Single winding input providing input/output)

Power Transformers

Isolation


Case Type X


Case Type A


Case Type M


Case Type U

:: Description

Triad isolation transformers are power transformers for isolating equipment from direct connection to the power line. They are offered in a variety of voltages and case types. Triad isolation transformers are also offered in hospital type (designed with an MD suffix) which are designed and constructed to meet the low leakage current requirements for today's medical equipment. The transformers are constructed with nonconcentrically wound coils. The primary and secondary are wound on separate arbors, then assembled on a laminate core side-by-side separated by insulation. This prevents electrical connection, under normal or overload conditions, between the primary and secondary windings. These hospital type units are offered with a resettable circuit breaker, providing protection from overload and short circuit conditions.

:: Specifications

Primary: 115/230 VAC, 50/60 Hz
Secondary: 115/230 VAC
Output Watts: 15 to 1,000 VA

:: Standard Applications

Section	Part No.	VA	Primary Voltage	Secondary Volts ±5%	Secondary Amps	Case Type	Connections	Lead Holes Used	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
A	**N-48X**	15	115	115.0	0.13	X (1)	Leads	•	1 15/16	3 3/16	2	2 1/16	•	1.35
B	**N-51X**	35	115	115.0	0.3	X (1)	Leads	•	2 9/32	3 11/16	2 1/8	3 1/8	•	1.70
C	**N-68X**	50	115/230§	115.0	0.435	X (1)	Leads	•	2 9/32	3 11/16	2 1/8	3 1/8	•	1.70
D	**N-53MG√**	85	115	115.0	0.74	M (3)	6' Cord, Plug & Socket	•	3 19/32	2 13/32	4 1/8	2 1/4	2 7/8	4.70
E	**N-76U***	100	115	115.0	0.86	U (2)	Leads	•	3 7/16	2 13/16	3	2 1/4	2 1/2	4.00
	N-77U*	100	115/230	115.0	0.86	U (2)	Leads	•	3 7/16	2 13/16	3	2 1/4	2 1/2	4.00
F	**N-54MG√**	150	115	115.0	1.3	M (3)	6' Cord, Plug & Socket	•	3 7/8	3 9/32	5 13/16	2 1/2	3 1/2	7.00
	N-73A	150	115	115/230§	0.65	A (3)	Leads	1	3 7/8	3 9/32	3 5/8	2 1/2	2 3/4	7.00
	N-67A	150	115/230§	115.0	1.3	A (3)	Leads	2	3 7/8	3 9/32	3 7/8	2 1/2	3	7.00
G	**N-55M**	250	115	115.0	2.17	M (3)	6' Cord, Plug & Socket	•	4 7/8	3 15/16	5	3	3 1/16	11.00
	N-55MG√	250	115	115.0	2.17	M (3)	6' Cord, Plug & Socket	•	4 7/8	3 15/16	5	3	3 1/16	11.00
	N-255MG√	250	230	115.0	2.17	M (3)	6' Cord, Plug & Socket	•	4 7/8	3 15/16	5	3	3 1/16	11.00
	N-66A	250	115/230§	115.0	2.17	A (3)	Leads	2	4 7/8	3 15/16	4 7/8	3	3 7/8	11.00
H	**N-57M**	500	115	115.0	4.35	M (5)	6' Cord, Plug & Socket	•	5 5/16	4 1/2	6 1/4	3 1/2	5 1/8	23.75

*§ Split winding √With ground wire *Unit does not include static shield*
Mounting hole sizes: (1) = 3/16" (2) = 13/64 x 3/8" (3) = 3/8 x 3/16" (5) = 1/2 x 1/4"

:: Isolation continued

Section	Type No.	VA	Primary Voltage	Secondary Volts ±5%	Secondary Amps	Case Type	Connections	Lead Holes Used	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
I	N-57MG√	500	115	115.0	4.35	M (5)	6' Cord, Plug & Socket	•	5 7/16	4 1/2	6 1/4	3 1/2	5 1/8	23.75
	N-257MG√	500	230	115.0	4.35	M (5)	6' Cord, Plug & Socket	•	5 7/16	4 1/2	6 1/4	3 1/2	5 1/8	23.75
J	N-59M	1,000	115	115.0	8.70	M (5)	6' Cord, Plug & Socket	•	5 7/16	4 1/2	7 1/8	3 1/2	6	31.0
	N-59MG√	1,000	115	115.0	8.70	M (5)	6' Cord, Plug & Socket	•	5 7/16	4 1/2	7 1/8	3 1/2	6	31.0
	N-259MG√	1,000	230	115.0	8.70	M (5)	6' Cord, Plug & Socket	•	5 7/16	4 1/2	7 1/8	3 1/2	6	31.0

√With ground wire Mounting hole sizes: (5) = ½ x ¼"

Technical Notes

1. Line cord, plug and receptacle are U.L. listed and verified to meet federal specifications.
2. Connections are by leads, plugs and sockets.
3. Hi-pot tested at 1,500 VRMS.
4. All units have static shields, except those marked with an asterisk.

Section	Type No.	VA	Primary Voltage	Secondary Volts ±5%	Secondary RMS Amps	Case Type	Connections	Lead Holes Used	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
K	N-90MD	250	115	115.0	2.17	M (3)	6' Cord, Plug & Socket Circuit Breaker	•	4 3/8	3 3/8	6 1/8	3	4 15/16	11.9
L	N-92MD	500	115	115.0	4.35	M (4)	6' Cord, Plug & Socket Circuit Breaker	•	5 11/32	4 1/2	7	3 1/2	5 3/8	17.6

Mounting hole sizes: (3) = 3/8 x 3/16" (4) = 21/32 x 9/32"
Leakage current from primary to secondary is rated at less than 50 micro-amps and is typically measured at less than 10 micro-amps.

When stock is a problem elsewhere, try us. We routinely have hundreds of thousands of completed standard units on hand. Call your nearest Triad distributor for a "stock status" on the industry's best -- Triad Transformers..

Power Transformers

UL Recognized
UL File: E65390

Class 2

Control Transformers - Class 2

:: Description

Triad control transformers come with tamper resistant shrouds for safety and steel bracket welded to the bottom of the transformer for ease of mounting.

:: Specifications

Maximun Power: 3 VA, 40 VA, 50 VA
Input (50/60 Hz): 120 V, 240 V, 120/208/240 V, 120/240 V, 208/240 V
Output: 10 V, 12 V, 24 V

:: Control Transformers

Section	Type No.	Primaries	Secondary	VA	Connections	Dimensions (mm) H	W	D	Mounting Dimensions	Wt. Lbs.	Fig.
A	TCT3-03E07AE	120V	12V	3	Lugs	54	42.5	60.0	48.77	0.5	A
	TCT3-04E07AE	240V	12V	3	Lugs	54	42.5	60.0	48.77	0.5	A
	TCT3-11E07AE	120V	10V	3	Lugs	54	42.5	60.0	48.77	0.5	A
	TCT3-12E07AE	240V	10V	3	Lugs	54	42.5	60.0	48.77	0.5	A
B	TCT40-01E07AB	120V	24V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-01E07AE	120V	24V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-01E07K	120V	24V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-02E07AB	240V	24V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-02E07AE	240V	24V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-02E07K	240V	24V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-05E07AB	120/208/240	24V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-05E07AE	120/208/240	24V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-05E07K	120/208/240	24V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-06E07AB	120/240	24V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-06E07AE	120/240	24V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-06E07K	120/240	24V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-09E07AB	208/240	24V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-09E07AE	208/240	24V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-09E07K	208/240	24V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
C	TCT40-03E07AB	120V	12V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-03E07AE	120V	12V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-03E07K	120V	12V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-04E07AB	240V	12V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-04E07AE	240V	12V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-04E07K	240V	12V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-07E07AB	120/208/240	12V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-07E07AE	120/208/240	12V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-07E07K	120/208/240	12V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-08E07AB	120/240	12V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-08E07AE	120/240	12V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-08E07K	120/240	12V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
	TCT40-10E07AB	208/240	12V	40	Lugs	56.5	92.5	61.0	79.38	1.5	B
	TCT40-10E07AE	208/240	12V	40	Lugs	62.5	95.0	57.0	79.38	1.5	C
	TCT40-10E07K	208/240	12V	40	Leads	56.5	92.5	61.0	79.38	1.5	D
D	TCT50-01E07AB	120V	24V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-01E07AE	120V	24V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-01E07K	120V	24V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-02E07AB	240V	24V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-02E07AE	240V	24V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-02E07K	240V	24V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-05E07AB	120/208/240	24V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-05E07AE	120/208/240	24V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-05E07K	120/208/240	24V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-06E07AB	120/240	24V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-06E07AE	120/240	24V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-06E07K	120/240	24V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-09E07AB	208/240	24V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-09E07AE	208/240	24V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-09E07K	208/240	24V	50	Leads	56.5	92.5	71.5	79.38	2.0	D

:: Control Transformers contiunued

Section	Type No.	Primaries	Secondary	VA	Connections	Dimensions (mm) H	W	D	Mounting Dimensions	Wt. Lbs.	Fig.
E	TCT50-03E07AB	120V	12V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-03E07AE	120V	12V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-03E07K	120V	12V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-04E07AB	240V	12V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-04E07AE	240V	12V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-04E07K	240V	12V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-07E07AB	120/208/240	12V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-07E07AE	120/208/240	12V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-07E07K	120/208/240	12V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-08E07AB	120/240	12V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-08E07AE	120/240	12V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-08E07K	120/240	12V	50	Leads	56.5	92.5	71.5	79.38	2.0	D
	TCT50-10E07AB	208/240	12V	50	Lugs	56.5	92.5	71.5	79.38	2.0	B
	TCT50-10E07AE	208/240	12V	50	Lugs	71.5	95.0	57.0	79.38	2.0	C
	TCT50-10E07K	208/240	12V	50	Leads	56.5	92.5	71.5	79.38	2.0	D

:: Outline Dimensions

Technical Notes
[mm]

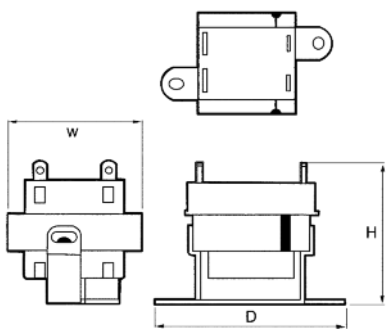


Figure A

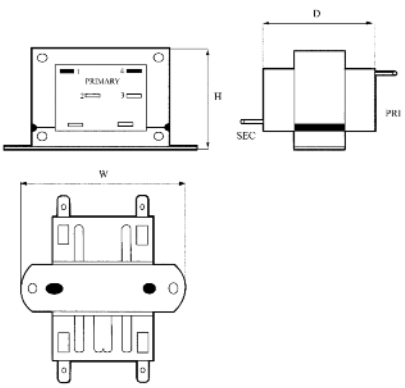


Figure B

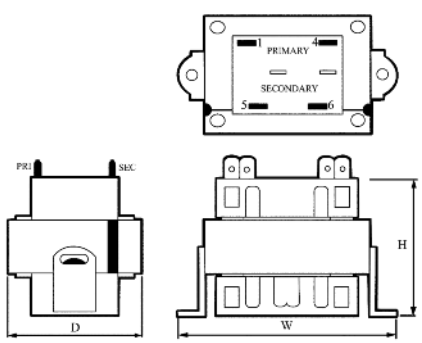


Figure C

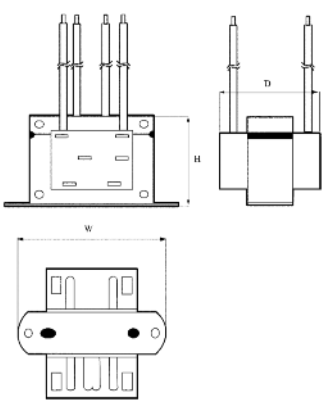
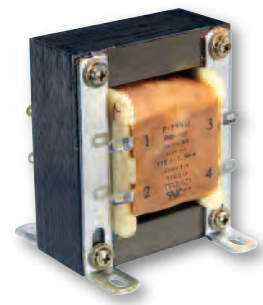


Figure D

Power Transformers

Chassis Mount: Control

Case Type Z



Case Type U

:: Description

Triad control transformers supply secondary voltages that are commonly utilized in various electronic, electro-magnetic and electrical control conditions. These include such applications as use with relays, solenoids, small motors, speed changers, pumps, heating elements, control valves for fluids and gases, fans and blowers, electronic tubes, automatic assembly equipment, recording devices, elevators, door openers, and low voltage lamps.

:: Specifications

Primary: 115/230 VAC, 50/60 Hz
VA Range: 12 to 192
Secondary: 6/12/24 VAC

:: Primary, 115/230 Volts / Secondaries, 6/12/24 Volts

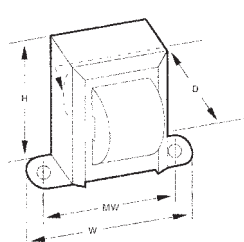
Section	Type No.	Secondaries Series	Secondaries Parallel	VA	Case Type	Connections	Dimensions H	Dimensions W	Dimensions D	Mounting Dimensions MW	Mounting Dimensions MD	Wt. Lbs.
A	**F-105Z**	12.0V CT @ 1.0A	6.0V @ 2.0A	12	Z	Lugs	2⅜	2⅞	1¼	2⅜	•	1.000
	F-211Z	48.0V CT @ 0.25A	24.0V @ 0.5A								•	0.678
B	**F-106Z**	12.0V CT @ 2.0A	6.0V @ 4.0A	24	Z	Lugs	2¾	3⅛	2	2 15/16	•	1.500
	F-212Z	48.0V CT @ 0.50A	24.0V @ 1.0A								•	1.050
C	**F-107Z**	24.0V CT @ 2.0A	12.0V @ 4.0A	48	Z	Lugs	3⅛	3⅝	2⅛	3⅛	•	2.500
	F-213Z	48.0V CT @ 1.0A	24.0V @ 2.0A								•	2.250
D	**F-398U**	24.0V CT @ 3.0A	12.0V @ 6.0A	72	U	Lugs	3 1/32	3 13/16	2 13/16	2¼	2¼	4.250
E	**F-108U**	24.0V CT @ 4.0A	12.0V @ 8.0A	96	U	Lugs	3 1/32	2 13/16	3 3/16	2¼	2¼	4.250
	F-214U	48.0V CT @ 2.0A	24.0V @ 4.0A								2⅝	3.240
F	**F-399U**	24.0V CT @ 6.0A	12.0V @ 12.0A	144	U	Lugs	4¾	3⅛	3½	2½	2⅞	5.900
	F-400U	48.0V CT @ 3.0A	24.0V @ 6.0A									
G	**F-109U**	24.0V CT @ 8.0A	12.0V @ 16.0A	192	U	Lugs	4 5/16	3 7/16	3 3/16	2¾	3	8.00
	F-215U	48.0 V CT @ 4.0A	24.0V @ 8.0A				4 5/16	3 7/16	3⅞	2¾	3	6.060

CT = Center Tap Mounting hole sizes: Z = 3/16" U = 13/64 x ⅜"

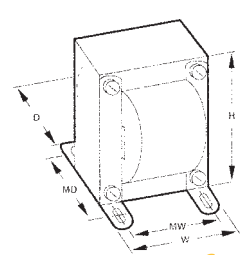
:: Outline Dimensions

Technical Notes

1. Hi-pot tested at 1,500 VRMS.
2. Secondaries may be connected in series or parallel for expanded voltage and current ranges. See Control Transformer Connections diagram.
3. Transformer termination is solder lug.



Case Type Z



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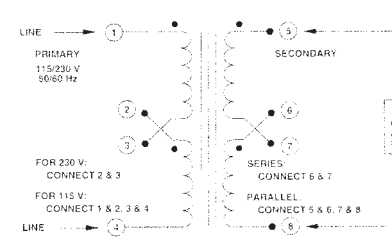


Control Transformer Connecions

Power Supplies

Wall Plug-Ins

UL File: E345519
UL Standard UL60950

Switchmode Power Supplies

:: Description

Triad prepackaged wall plug-in power supplies decrease product design time. These plug-ing power sources eliminate the need for internal power supply cooling devices, thereby reducing the noise level, size and weight of the end product. In addition, these compact power suources keep heat away from sensitive circuits, and supply a safer lower output to the end product. Wall plug-in sources are completely enclosed to prevent tampering. They are offered in a wide range of popular voltages,power levels and reversed polarity (-R). They output volatage is regulated; which means the output voltage will not vary much with load. Models are availalble with generous six foot cord lenghts. Available in 50-60Hz operating frequency.

:: Specifications

Maximum Power From: 6.75 to 36 W
Input Voltage: 100 - 240 VAC, 50-60 Hz
Output Voltage From: 4.5 to 24 VDC
Level IV and V efficiency. Meets EIAS 2007 energy efficiency requirements for external power supplies

:: WSU Series

Section	Part No. & Polarity		Input	Output			Dimensions			Efficiency
	Center (+)	Center (-)	Voltage (VAC)	VDC	IDA (A)	Type	H	W	D	Level
	WSU045-1500	WSU045-1500-R	100-240	4.5	1.5	Switchmode	60.00	39.00	31.00	V
	WSU045-2000	WSU045-2000-R	100-240	4.5	2	Switchmode	71.00	43.00	30.00	V
A	WSU045-3000	WSU045-3000-R	100-240	4.5	3	Switchmode	77.00	48.00	31.00	V
	WSU050-1500	WSU050-1500-R	100-240	5	1.5	Switchmode	60.00	39.00	31.00	V
	WSU050-2000	WSU050-2000-R	100-240	5	2	Switchmode	71.00	43.00	30.00	V
B	WSU050-3000	WSU050-3000-R	100-240	5	3	Switchmode	77.00	48.00	31.00	V
	WSU050-4000	WSU050-4000-R	100-240	5	4	Switchmode	77.00	48.00	31.00	IV
	WSU060-1250	WSU060-1250-R	100-240	6	1.25	Switchmode	60.00	39.00	31.00	V
	WSU060-2000	WSU060-2000-R	100-240	6	2	Switchmode	71.00	43.00	30.00	IV
C	WSU060-3000	WSU060-3000-R	100-240	6	3	Switchmode	77.00	48.00	31.00	IV
	WSU060-4000	WSU060-4000-R	100-240	6	4	Switchmode	77.00	48.00	31.00	IV
	WSU075-1000	WSU075-1000-R	100-240	7.5	1	Switchmode	60.00	39.00	31.00	V
	WSU075-1500	WSU075-1500-R	100-240	7.5	1.5	Switchmode	71.00	43.00	30.00	IV
	WSU075-2400	WSU075-2400-R	100-240	7.5	2.4	Switchmode	77.00	48.00	31.00	IV
D	WSU075-3200	WSU075-3200-R	100-240	7.5	3.2	Switchmode	77.00	48.00	31.00	V
	WSU075-4000	WSU075-4000-R	100-240	7.5	4	Switchmode	84.00	53.00	31.00	IV
	WSU090-0800	WSU090-0800-R	100-240	9	0.8	Switchmode	60.00	39.00	31.00	V
	WSU090-1300	WSU090-1300-R	100-240	9	1.3	Switchmode	71.00	43.00	30.00	V
	WSU090-2000	WSU090-2000-R	100-240	9	2	Switchmode	77.00	48.00	31.00	V
E	WSU090-2500	WSU090-2500-R	100-240	9	2.5	Switchmode	77.00	48.00	31.00	IV
	WSU090-3500	WSU090-3500-R	100-240	9	3.5	Switchmode	84.00	53.00	31.00	IV
	WSU120-0700	WSU120-0700-R	100-240	12	0.7	Switchmode	60.00	39.00	31.00	V
	WSU120-1000	WSU120-1000-R	100-240	12	1	Switchmode	71.00	43.00	30.00	V
	WSU120-1500	WSU120-1500-R	100-240	12	1.5	Switchmode	77.00	48.00	31.00	V
F	WSU120-2000	WSU120-2000-R	100-240	12	2	Switchmode	77.00	48.00	31.00	V
	WSU120-3000	WSU120-3000-R	100-240	12	3	Switchmode	84.00	53.00	31.00	V
	WSU135-0620	WSU135-0620-R	100-240	13.5	0.62	Switchmode	60.00	39.00	31.00	V
	WSU135-0880	WSU135-0880-R	100-240	13.5	0.88	Switchmode	71.00	43.00	30.00	V
	WSU135-1330	WSU135-1330-R	100-240	13.5	1.33	Switchmode	77.00	48.00	31.00	V
G	WSU135-1770	WSU135-1770-R	100-240	13.5	1.77	Switchmode	77.00	48.00	31.00	V
	WSU135-2660	WSU135-2660-R	100-240	13.5	2.66	Switchmode	84.00	53.00	31.00	V

:: WSU Series continued

Section	Part No. & Polarity		Input	Output		Type	Dimensions			Efficiency
	Center (+)	Center (-)	Voltage (VAC)	VDC	IDA (A)		H	W	D	Level
H	WSU150-0560	WSU150-0560-R	100-240	15	0.56	Switchmode	60.00	39.00	31.00	V
	WSU150-0800	WSU150-0800-R	100-240	15	0.8	Switchmode	71.00	43.00	30.00	V
	WSU150-1200	WSU150-1200-R	100-240	15	1.2	Switchmode	77.00	48.00	31.00	V
	WSU150-1600	WSU150-1600-R	100-240	15	1.6	Switchmode	77.00	48.00	31.00	V
	WSU150-2400	WSU150-2400-R	100-240	15	2.4	Switchmode	84.00	53.00	31.00	V
I	WSU180-0450	WSU180-0450-R	100-240	18	0.45	Switchmode	60.00	39.00	31.00	V
	WSU180-0660	WSU180-0660-R	100-240	18	0.66	Switchmode	71.00	43.00	30.00	V
	WSU180-1000	WSU180-1000-R	100-240	18	1	Switchmode	77.00	48.00	31.00	V
	WSU180-1330	WSU180-1330-R	100-240	18	1.33	Switchmode	77.00	48.00	31.00	V
	WSU180-2000	WSU180-2000-R	100-240	18	2	Switchmode	84.00	53.00	31.00	V
J	WSU240-0500	WSU240-0500-R	100-240	24	0.5	Switchmode	71.00	43.00	30.00	V
	WSU240-0750	WSU240-0750-R	100-240	24	0.75	Switchmode	77.00	48.00	31.00	V
	WSU240-1000	WSU240-1000-R	100-240	24	1	Switchmode	77.00	48.00	31.00	V
	WSU240-1500	WSU240-1500-R	100-240	24	1.5	Switchmode	84.00	53.00	31.00	V

:: Outline Dimensions

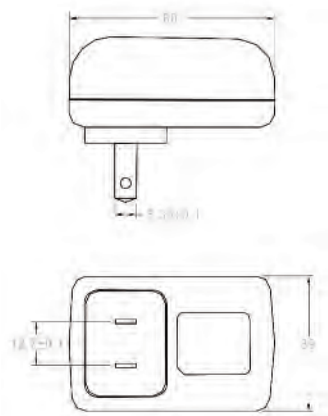


Figure 1

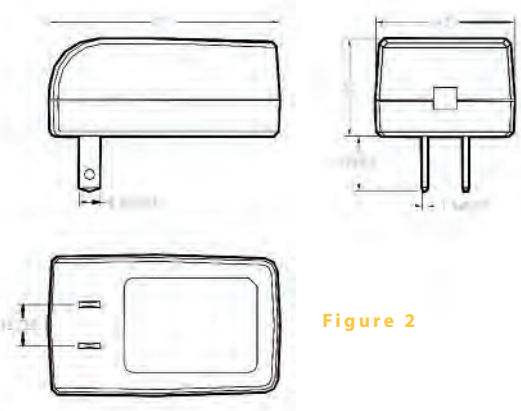


Figure 2

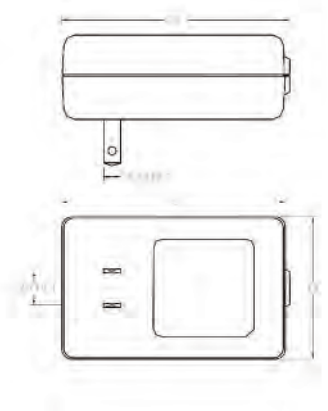


Figure 3

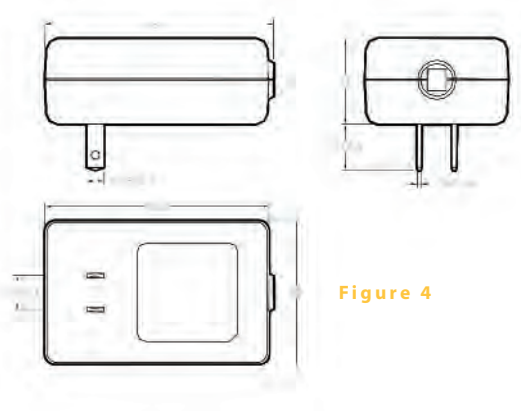
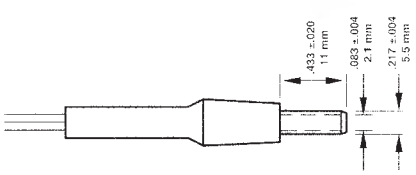


Figure 4



Output Plug

Wall Plug-Ins

UL File: E245587
UL Standard UL1310
DOE Compliance: See Page 72

Class 2

DC Power Supply

:: Description

Triad prepackaged wall plug-in power supplies decrease product design time. These plug-in power sources eliminate the need for internal power supply cooling devices, thereby reducing the noise level, size and weight of the end product. In addition, these compact power sources keep heat away from sensitive circuits, and supply a safer lower output to the end product. Wall plug-in power sources are completely enclosed to prevent tampering. And since they carry many required agency listings, their use aids in gaining agency approvals. Offered in a wide range of popular voltages, the plug-in power sources are available in AC/DC unregulated models with generous six foot cord lengths. Available in 60 Hz only.

:: Wall Plug-Ins

Type No.	Input		Output		Type	Dimensions (mm)		
	VAC	Watts	VDC	IDC (A)		H	W	D
WDU6-100	120	6.0	6.0	0.10	AC/DC Unreg.	56	43	37
WDU6-200	120	3.0	6.0	0.20	AC/DC Unreg.	60	43	39
WDU6-300	120	4.5	6.0	0.30	AC/DC Unreg.	60	43	39
WDU6-600	120	7.5	6.0	0.60	AC/DC Unreg.	70	50	41
WDU6-800	120	10.0	6.0	0.80	AC/DC Unreg.	70	50	41
WDU6-1000	120	12.0	6.0	1.00	AC/DC Unreg.	70	50	41
WDU6-1200	120	15.0	6.0	1.20	AC/DC Unreg.	70	50	41
WDU75-100	120	6.0	7.5	0.10	AC/DC Unreg.	56	43	37
WDU75-200	120	3.5	7.5	0.20	AC/DC Unreg.	60	43	39
WDU75-300	120	4.5	7.5	0.30	AC/DC Unreg.	60	43	39
WDU75-800	120	11.5	7.5	0.80	AC/DC Unreg.	70	50	41
WDU75-1000	120	15.0	7.5	1.00	AC/DC Unreg.	71	56	48
WDU9-100	120	2.3	9.0	0.10	AC/DC Unreg.	60	43	39
WDU9-300	120	5.0	9.0	0.30	AC/DC Unreg.	60	43	39
WDU9-500	120	18.5	9.0	0.50	AC/DC Unreg.	70	50	41
WDU9-1000	120	15.5	9.0	1.00	AC/DC Unreg.	80	60	48
WDU9-1200	120	18.5	9.0	1.20	AC/DC Unreg.	80	60	48
WDU9-2300	120	33.0	9.0	2.30	AC/DC Unreg.	85	68	55
WDU12-100	120	2.8	12.0	0.10	AC/DC Unreg.	60	43	39
WDU12-300	120	6.5	12.0	0.30	AC/DC Unreg.	70	50	41
WDU12-600	120	12.5	12.0	0.60	AC/DC Unreg.	80	60	48
WDU12-1200	120	23.5	12.0	1.20	AC/DC Unreg.	80	60	48
WDU12-1900	120	33.0	12.0	1.90	AC/DC Unreg.	85	68	55
WDU15-200	120	5.0	15.0	0.20	AC/DC Unreg.	60	43	39
WDU15-600	120	15.0	15.0	0.60	AC/DC Unreg.	80	60	48
WDU15-1000	120	24.0	15.0	1.00	AC/DC Unreg.	80	60	48
WDU15-1700	120	37.0	15.0	1.70	AC/DC Unreg.	85	68	55
WDU18-100	120	6.0	18.0	0.10	AC/DC Unreg.	56	43	37
WDU18-200	120	6.5	18.0	0.20	AC/DC Unreg.	70	50	41
WDU18-250	120	12.0	18.0	0.25	AC/DC Unreg.	64	51	41
WDU18-300	120	9.0	18.0	0.30	AC/DC Unreg.	70	50	41
WDU18-600	120	17.0	18.0	0.60	AC/DC Unreg.	80	60	48
WDU18-1000	120	27.5	18.0	1.00	AC/DC Unreg.	80	60	48
WDU18-1400	120	34.0	18.0	1.40	AC/DC Unreg.	85	68	55
WDU24-200	120	9.0	24.0	0.20	AC/DC Unreg.	60	43	39
WDU24-300	120	11.8	24.0	0.30	AC/DC Unreg.	70	50	41
WDU24-500	120	18.0	24.0	0.50	AC/DC Unreg.	80	60	48
WDU24-800	120	28.5	24.0	0.80	AC/DC Unreg.	80	60	48
WDU24-1200	120	38.0	24.0	1.20	AC/DC Unreg.	85	68	55

Note: Specifications subject to change without notice.

Wall Plug-Ins

UL File: E245587
UL Standard UL1310

Class 2

AC Power Supply

:: Description

Triad prepackaged wall plug-in power supplies decrease product design time. These plug-in power sources eliminate the need for internal power supply cooling devices, thereby reducing the noise level, size and weight of the end product. In addition, these compact power sources keep heat away from sensitive circuits, and supply a safer lower output to the end product. Wall plug-in power sources are completely enclosed to prevent tampering. And since they carry many required agency listings, their use aids in gaining agency approvals. Offered in a wide range of popular voltages, the plug-in power sources are available in AC/AC unregulated models with generous six foot cord lengths. Available in 60 Hz only.

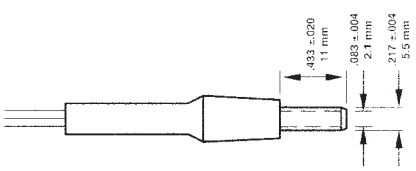
:: Wall Plug-Ins

Type No.	Input		Output		Type	Dimensions (mm)		
	VAC	Watts	VAC	IAC (A)		H	W	D
WAU12-200	120	4.0	12.0	0.20	AC/AC Unreg.	60	43	39
WAU12-500	120	8.8	12.0	0.50	AC/AC Unreg.	70	50	41
WAU12-1000	120	17.0	12.0	1.00	AC/AC Unreg.	70	50	41
WAU12-1500	120	24.0	12.0	1.50	AC/AC Unreg.	80	60	48
WAU12-2000	120	33.0	12.0	2.00	AC/AC Unreg.	80	60	48
WAU12-2500	120	38.0	12.0	2.50	AC/AC Unreg.	85	68	55
WAU16-400	120	9.0	16.0	0.40	AC/AC Unreg.	70	50	41
WAU16-500	120	11.2	16.0	0.50	AC/AC Unreg.	80	60	48
WAU16-1000	120	21.5	16.0	1.00	AC/AC Unreg.	80	60	48
WAU16-2400	120	47.0	16.0	2.40	AC/AC Unreg.	85	68	55
WAU20-200	120	6.0	20.0	0.20	AC/AC Unreg.	70	50	41
WAU20-500	120	13.5	20.0	0.50	AC/AC Unreg.	80	60	48
WAU20-2000	120	48.0	20.0	2.00	AC/AC Unreg.	85	68	55
WAU24-200	120	7.2	24.0	0.20	AC/AC Unreg.	70	50	41
WAU24-450	120	15.0	24.0	0.45	AC/AC Unreg.	70	50	41
WAU24-750	120	23.5	24.0	0.75	AC/AC Unreg.	80	60	48
WAU24-1000	120	32.0	24.0	1.00	AC/AC Unreg.	80	60	48
WAU24-1800	120	52.2	24.0	1.80	AC/AC Unreg.	85	68	55

Note: Specifications subject to change without notice.

Technical Notes

1. Inside (tip) - positive (+), outside - negative (-)
2. Plug use on DC and AC models



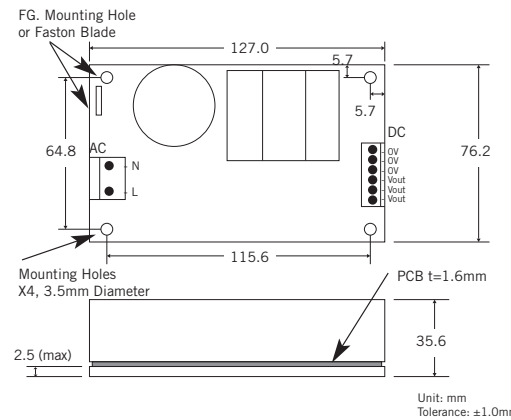
:: U.S. DOE Compliance per Sec. 301 of EISA 2007

As of July 1, 2008, this product is intended for use as follows: Requires Federal Food and Drug Administration listing and approval as a medical device in accordance with section 513 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 360c). Powers the charger of a detachable battery pack or charges the battery of a product that is fully or primarily motor operated. As a service part or a spare part for an end-use product manufactured before July 1, 2008, that constitutes the primary load of this power supply.

ALS50 Series

TUV Cert. No.: 50200771
UL File: E204980

50 Watt Single Output Open Frame Switching Power Supply for General Purpose Applications



:: Specifications (@25°C)

Input Characteristics

Input Voltage:	90 - 264 VAC / 120-370 VDC
Input Frequency Range:	47 - 63 Hz
Max Input Current:	1.0 / 0.5 A @ 110 / 220 VAC (max)
Max Inrush Current:	30A @ 220 VAC (cold start)

Output Characteristics

Minimum Load:	No minimum load
Adjustable Output Range:	±10%
Ripple/Noise (pk-pk 20MHz):	3.3/5/12/24 V = 50/75/120/240 mV
Regulation:	±2.0% Load / ±1% Line
Hold-up Time:	17 ms min, 100% Load @ 110 VAC
Rise-up Time:	500 ms max @ 110 VAC
Over Current Protection:	>120% (Auto-recovery)
Over Voltage Protection:	>105% (Auto-recovery)

General Specifications

Dimension (LxWxH):	5.00 x 3.00 x 1.40" / 127 x 76.2 x 35.6 mm
Weight:	300 g
Warranty:	2 years

Environmental Specifications

Operating Temperature:	0~50°C Full Load, derate 3.0%/°C up to 60°C
Storage Temperature:	-25~+85°C
Cooling:	Convection Cooled Operation
Humidity:	10~95% RH, non-condensing
Vibration:	0 - 55 Hz, 2G 1min / cycle, period of 60min, each axis
Reliability:	>195,000 Hours MTBF

EMC & Safety Specifications

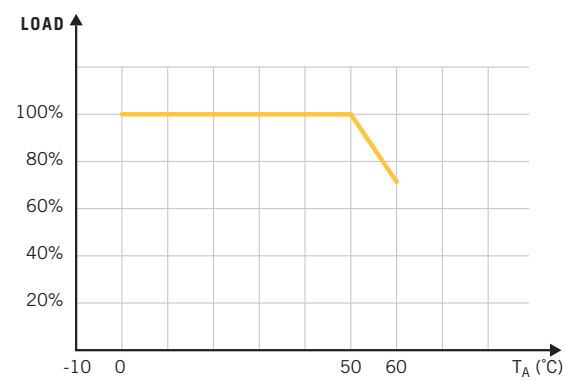
EMC Emissions:	EN55022,VCCI,CISPR22 Class A (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11
Safety Approval:	UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50070245)
Dielectric Strength:	Input-Output 3 kVAC / 1 min Input-Ground 2 kVAC / 1 min
Insulation Resistance:	Output-Ground: >100 Mohm / 500 VDC

:: Connector Types

Input: Housing = Molex 09-50-3031 / Terminal = Molex 08-50-0105
Output: Housing = Molex 09-50-3061 / Terminal = Molex 08-50-0105

:: Mounting Recommendation

:: Derating Curve

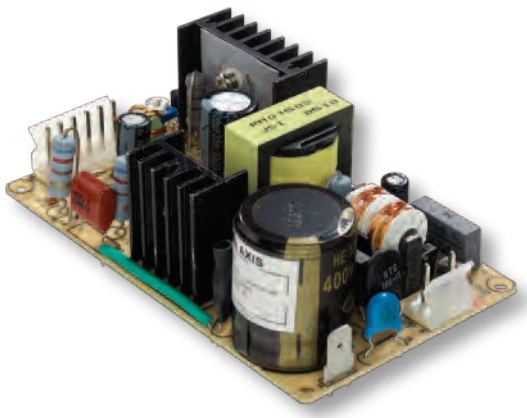


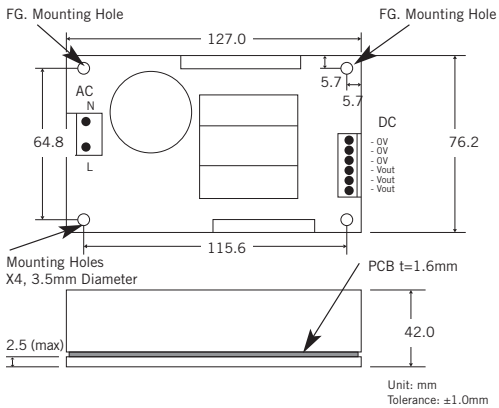
Part Number	Voltage	Current	Efficiency
ALS50-3.3	3.3V	9.1A	70%
ALS50-5	5.0V	9.0A	70%
ALS50-12	12V	4.2A	70%
ALS50-24	24V	2.1A	70%

ALS75 Series

TUV Cert. No.: 50200771
UL File: E204980

75 Watt Single Output Open Frame Switching Power Supply for General Purpose Applications





:: Specifications (@25°C)

Input Characteristics

Input Voltage:	90 - 264 VAC / 120-370 VDC
Input Frequency Range:	47 - 63 Hz
Max Input Current:	1.8 / 0.9 A @ 110 / 220 VAC (max)
Max Inrush Current:	30 A @ 220 VAC (cold start)

Output Characteristics

Minimum Load:	No minimum load
Adjustable Output Range:	±10%
Ripple/Noise (pk-pk 20MHz):	100 mv
Regulation:	±2.0% Load / ±1% Line
Hold-up Time:	17 ms min, 100% Load @ 110 VAC
Rise-up Time:	500 ms max @ 110 VAC
Over Current Protection:	>120%, recycle AC to reset
Over Voltage Protection:	>105% (Zener Diode)

General Specifications

Dimension (LxWxH):	5.00 x 3.00 x 1.40" / 127 x 76.2 x 35.6 mm
Weight:	350 g
Warranty:	2 years

Environmental Specifications

Operating Temperature:	0~50°C Full Load, derate 3.0%/°C up to 60°C
Storage Temperature:	-25~+85°C
Cooling:	Convection Cooled Operation
Humidity:	30~90% RH, non-condensing
Vibration:	0 - 55 Hz, 2G 1 min / cycle, period of 60 min, each axis
Reliability:	>186,000 Hours MTBF

EMC & Safety Specifications

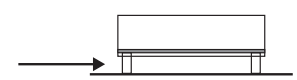
EMC Emissions:	EN55022,VCCI,CISPR22 Class A (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11
Safety Approval:	UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50070245)
Dielectric Strength:	Input-Output 3 kVAC / 1 min Input-Ground 2 kVAC / 1 min
Insulation Resistance:	Output-Ground: >100M ohm / 500 VDC

:: Connector Types

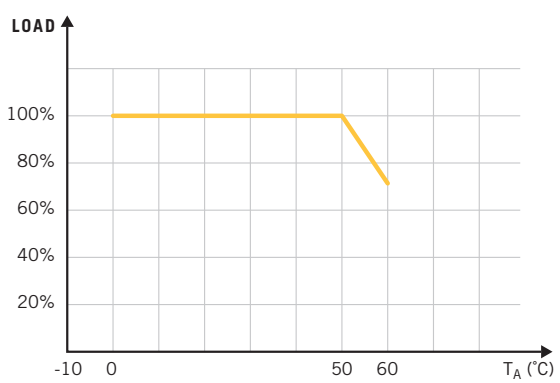
Input: Housing = Molex 09-50-3031 / Terminal = Molex 08-50-0105
Output: Housing = Molex 09-50-3061 / Terminal = Molex 08-50-0105

:: Mounting Recommendation

7mm Standoff-spacers (X4)
Located under Mounting-holes



:: Derating Curve

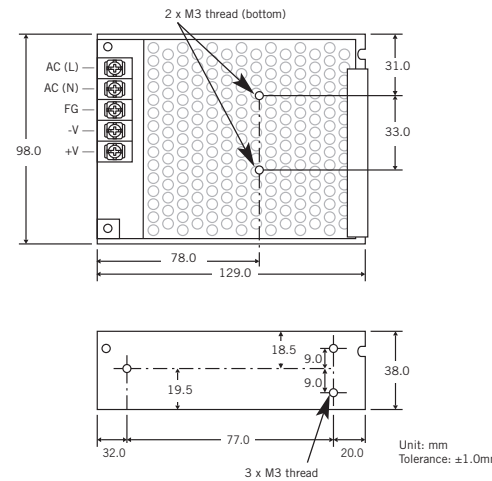


Part Number	Voltage	Current	Efficiency
ALS75-3.3	3.3V	12A	70%
ALS75-5	5.0V	12A	70%
ALS75-12	12V	6.2A	70%
ALS75-24	24V	3.1A	70%

AWSP40 Series

TUV Cert. No.: 50200771
UL File: E204980

40 Watt Single Output Enclosed Switching Power Supply for General Purpose Applications



:: Specifications (@25°C)

Input Characteristics

Input Voltage:	85 - 264 VAC
Input Frequency Range:	47 - 63 Hz
Max Input Current:	1.0 A (max)
Max Inrush Current:	20 / 40 A @ 110 / 220 VAC (cold start)

Output Characteristics

Minimum Load:	No minimum load
Adjustable Output Range:	±10%
Ripple/Noise (pk-pk 20MHz):	5/12/24 V = 75/100/100 mV
Regulation:	±1.0% Load / ±0.5% Line
Hold-up Time:	30ms min, 100% Load @ 220 VAC
Rise-up Time:	300 ms max @ 220 VAC
Over Current Protection:	>120%, Power cycle reset
Over Voltage Protection:	>110% (Zener Diode)

General Specifications

Switching Frequency:	50 kHz
Dimension (LxWxH):	5.08 x 3.86 x 1.50" / 129 x 98 x 38 mm
Weight:	360 g
Warranty:	2 years

Environmental Specifications

Operating Temperature:	0~+45°C Full Load, derate 3.33%/°C up to 60°C
Storage Temperature:	-25~+75°C
Cooling:	Convection Cooled Operation
Humidity:	10~95% RH, non-condensing
Vibration:	10 - 55 Hz, 2G 1 min / cycle, period of 60 min, each axis
Reliability:	>176,000 Hours MTBF

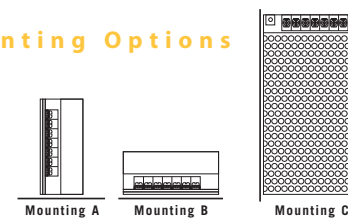
EMC & Safety Specifications

EMC Emissions:	EN55022,VCCI,CISPR22 Class B (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11
Safety Approval:	UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50067240)
Dielectric Strength:	Input-Output 3 kVAC / 1 min Input-Ground 2.5 kVAC / 1 min
Insulation Resistance:	Output-Ground: >100 Mohm / 500 VDC

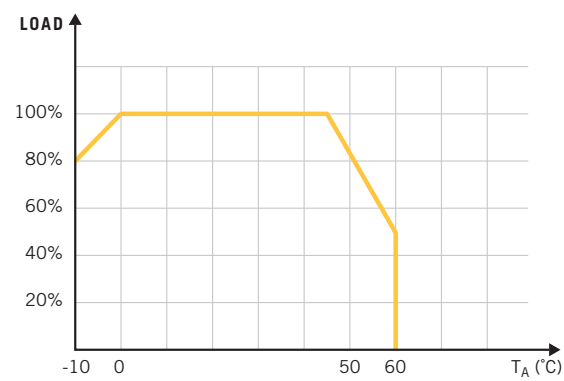
:: Connector Types

Input: Screw Terminals
Output: Screw Terminals

:: Mounting Options



:: Derating Curve

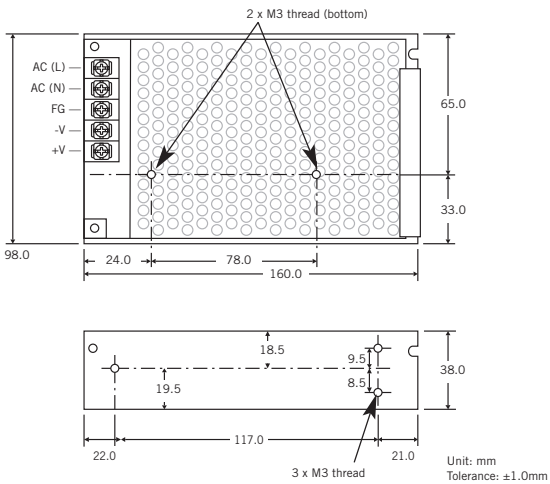


Part Number	Voltage	Current	Efficiency
AWSP40-5	5.0V	7.6A	72%
AWSP40-12	12V	3.3A	77%
AWSP40-24	24V	1.7A	80%

AWSP60 Series

TUV Cert. No.: 50200771
UL File: E204980

60 Watt Single Output Enclosed Switching Power Supply for General Purpose Applications



:: Specifications (@25°C)

Input Characteristics

Input Voltage:	85 - 264 VAC
Input Frequency Range:	47 - 63 Hz
Max Input Current:	1.3A (max)
Max Inrush Current:	20 / 40 A @ 110 / 220 VAC (cold start)

Output Characteristics

Minimum Load:	No minimum load
Adjustable Output Range:	±10%
Ripple/Noise (pk-pk 20MHz):	5/12/24 V = 75/100/100 mV
Regulation:	±1.0% Load / ±0.5% Line
Hold-up Time:	30ms min, 100% Load @ 220 VAC
Rise-up Time:	300ms max @ 220 VAC
Over Current Protection:	>120%, Power cycle reset
Over Voltage Protection:	>110% (Zener Diode)

General Specifications

Switching Frequency:	45 kHz
Dimension (LxWxH):	6.30 x 3.86 x 1.50" / 160 x 98 x38 mm
Weight:	450g
Warranty:	2 years

Environmental Specifications

Operating Temperature:	0~+45°C Full Load, derate 3.33%/°C up to 60°C
Storage Temperature:	-25~+75°C
Cooling:	Convection Cooled Operation
Humidity:	10~95% RH, non-condensing
Vibration:	10 - 55 Hz, 2G 1 min / cycle, period of 60 min, each axis
Reliability:	>150,000 Hours MTBF

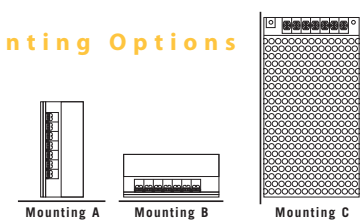
EMC & Safety Specifications

EMC Emissions:	EN55022,VCCI,CISPR22 Class B (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11
Safety Approval:	UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50067240)
Dielectric Strength:	Input-Output 3k VAC / 1 min Input-Ground 2.5 kVAC / 1 min
Insulation Resistance:	Output-Ground: >100M ohm / 500 VDC

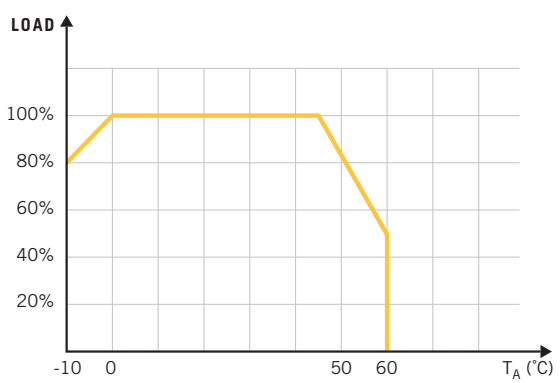
:: Connector Types

Input: Screw Terminals
Output: Screw Terminals

:: Mounting Options



:: Derating Curve

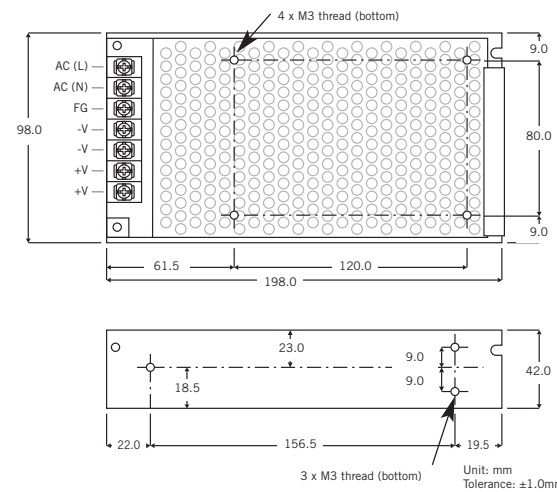


Part Number	Voltage	Current	Efficiency
AWSP60-5	5.0V	12A	73%
AWSP60-12	12V	5.0A	78%
AWSP60-24	24V	2.5A	81%

AWSP100 Series

TUV Cert. No.: 50200771
UL File: E204980

100 Watt Single Output Enclosed Switching Power Supply with PFC for General Purpose Applications



:: Specifications (@25°C)

Input Characteristics

Input Voltage:	88 - 264 Vac
Input Frequency Range:	47 - 63 Hz
Max Input Current:	1.8 A @ Vin (rated)
Max Inrush Current:	20A / 40 A @ 110 / 220 VAC (cold start)
Power Factor:	>0.92

Output Characteristics

Minimum Load:	No minimum load
Adjustable Output Range:	±10%
Ripple & Noise:	100 mV
Regulation:	±1.0% Load / ±0.5% Line
Efficiency:	75%
Start-up Time:	300 ms max @ 230 VAC
Hold-up Time:	20 ms min, 100% Load@230 Vac
Rise-up Time:	600 ms max, 100% Load@230 Vac
Over Current Protection:	105% - 150%, Power cycle reset
Over Voltage Protection:	125% - 145%

General Specifications

Switching Frequency:	134 kHz (PWM) / 67 kHz (PFC)
Dimension (LxWxH):	7.83 x 3.86 x 1.65" / 199 x 98 x 42 mm
Weight:	560 g net, 610 g gross
Warranty:	2 years

Environmental Specifications

Operating Temperature:	0~60°C Full Load
Storage Temperature:	-25~+75°C
Humidity:	20 to 90% RH, non-condensing
Vibration:	10 - 55Hz, 2 G 1 min / cycle, period of 60 min, each axis
Reliability:	>167,000 Hours MTBF

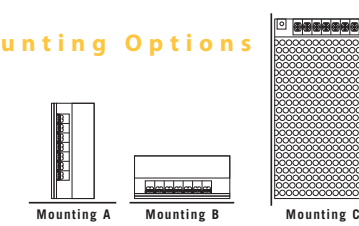
EMC & Safety Specifications

EMC Emissions:	Conforms to EN55022,VCCI,CISPR22 Class B (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11
Safety Approval:	UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50067240)

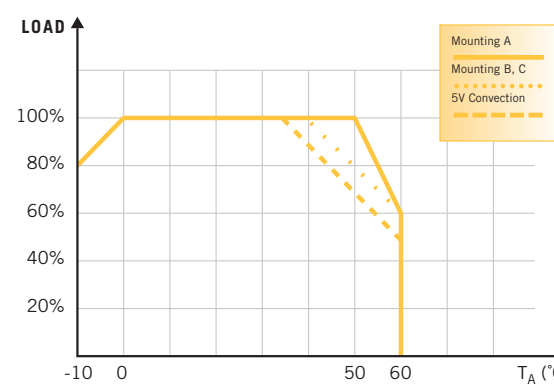
:: Connector Types

Input: Screw Terminals
Output: Screw Terminals

:: Mounting Options



:: Derating Curve

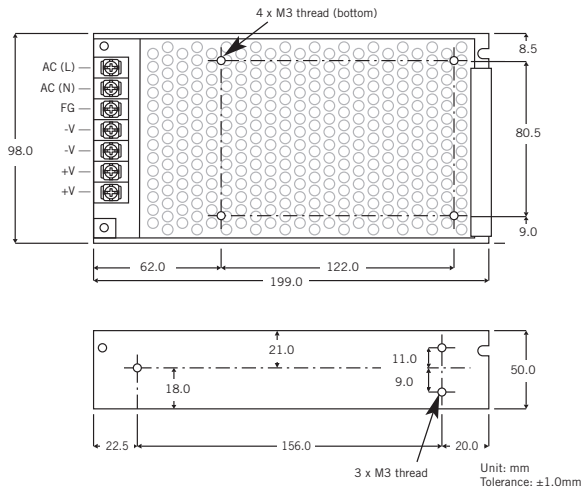


Part Number	Voltage	Current	Efficiency
AWSP100-5	5.0V	20A	75%
AWSP100-12	12V	8.4A	80%
AWSP100-24	24V	4.2A	84%

AWSP150 Series

TUV Cert. No.: 50200771
UL File: E204980

150 Watt Single Output Enclosed Switching Power Supply with PFC for General Purpose Applications



:: Specifications (@25°C)

Input Characteristics

Input Voltage:	88 - 264 VAC
Input Frequency Range:	47 - 63 Hz
Power Factor:	> 0.92
Max Input Current:	2.7A (max)
Max Inrush Current:	20 / 40 A @ 110 / 220 VAC (cold start)

Output Characteristics

Minimum Load:	No minimum load
Adjustable Output Range:	±10%
Ripple/Noise (pk-pk 20MHz):	5/12/24 V = 150/180/240 mV
Regulation:	±1.0% Load / ±0.5% Line
Hold-up Time:	20 ms min, 100% Load @ 220 VAC
Rise-up Time:	600 ms max @ 230 VAC
Over Current Protection:	>105~150%, Power cycle reset
Over Voltage Protection:	>125%

General Specifications

Switching Frequency:	134 kHz (PWM) / 687 kHz (PFC)
Dimension (LxWxH):	7.83 x 3.86 x 1.65" / 199 x 98 x42 mm
Weight:	560g
Warranty:	2 years

Environmental Specifications

Operating Temperature:	0~+60°C Full Load (see derating curve)
Storage Temperature:	-25~+75°C
Cooling:	Convection Cooled Operation
Humidity:	10~95% RH, non-condensing
Vibration:	10 - 55 Hz, 2G 1min / cycle, period of 60 min, each axis
Reliability:	>144,000 Hours MTBF

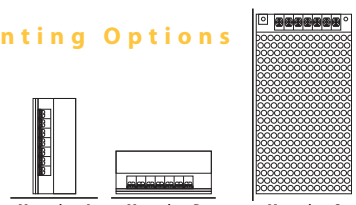
EMC & Safety Specifications

EMC Emissions:	EN55022, VCCI,CISPR22 Class B (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11
Safety Approval:	UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50067240)
Dielectric Strength:	Input-Output 3 kVAC / 1 min Input-Ground 2.5 kVAC / 1 min
Insulation Resistance:	Output-Ground: >100 Mohm / 500 VDC

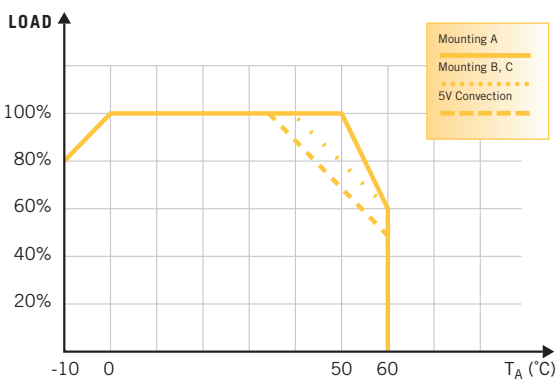
:: Connector Types

Input: Screw Terminals
Output: Screw Terminals

:: Mounting Options



:: Derating Curve

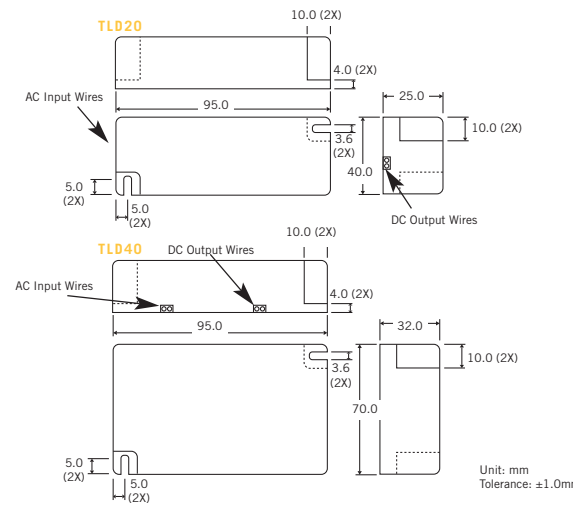


Part Number	Voltage	Current	Efficiency
AWSP150-5	5.0V	30A	75%
AWSP150-12	12V	12.5A	80%
AWSP150-24	24V	6.3A	83%

TLD1020/40 Series

UL File: E305150

20-40 Watt Single Output Encapsulated Switching Power Supply with PFC for Indoor & Outdoor IP66/NEMA 4 Applications



:: Specifications (@25°C)

Input Characteristics

Input Voltage:	100-304 VAC
Input Frequency Range:	47 - 63 Hz
Power Factor:	0.9 at Full Load & 115 VAC
Crest Factor (Ipk):	1.5 Max
Max Input Current (max):	TLD1020: 0.3/ 0.15 A @ 115/230 VAC TLD040: 0.5/0.25 A @ 115/230 VAC
Max Inrush Current:	5 / 10A @ 115 / 230 VAC (cold start)

Output Characteristics

Adjustment Range:	Fixed
Setpoint Accuracy	±5%
Current Accuracy:	±1% (when applicable)
Ripple/Noise (pk-pk 20MHz):	±5%
Regulation:	±3.0% Load / ±3.0% Line
Hold-up Time:	1/2 Cycle @ 120 VAC & 80% Load (min)
Over Current Protection:	120% (Auto-recovery)
Over Voltage Protection:	120% (Auto-recovery)

General Specifications

Dimension (LxWxH):	TLD1020: 3.74 x 1.57 x 0.97" / 95 x 40 x 25mm TLD1040: 3.74 x 2.76 x1.26" / 95 x 70 x 32mm
Weight:	120g
Reliability (MTBF)	>100k hrs. (Full Load & 25°C Operation)
Warranty:	3 years

Environmental Specifications

Operating Temperature:	-30~+60°C Full Load, derate 1%/°C from 60~70°C max
Storage Temperature:	-40~+85°C
Cooling:	Convection Cooled Operation
Humidity:	5~95% RH, non-condensing
Vibration:	5 - 50 Hz, 2G 1 min / cycle, period of 60 min, each axis

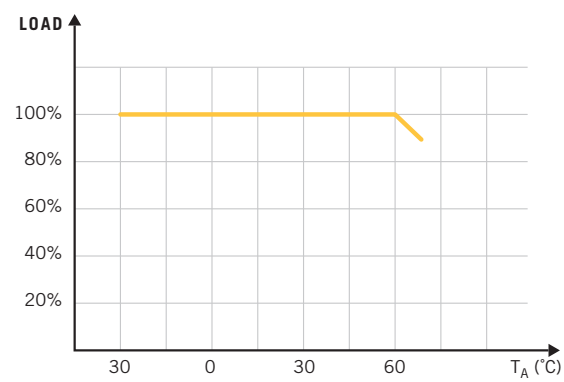
EMC & Safety Specifications

EMC Emissions:	Compliant to 47CFR, Part 2, Part 15 and Cispr PUB, 22
Class B Safety Approval:	UL/cUL 1310, UL48, CE Mark (LVD)

:: Connector Types

Input: 18AWG Wire, 5 inch leads
Output: 18AWG Wire, 5 inch leads

:: Derating Curve

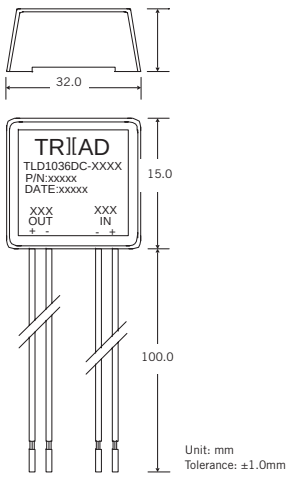


Constant Voltage Models	Voltage	Current	Efficiency
TLD1020-12	12V	1.66A	84%
TLD1020-24	24V	0.83A	84%
TLD1040-12	12V	3.33A	84%
TLD1040-24	24V	1.67A	84%

Constant Current Models	Adc	VDC	Efficiency
TLD1020-24-C0350	350mA	12-24V	84%
TLD1020-24-C0700	700mA	12-24V	84%
TLD1020-36-C0350	350mA	18-36V	84%
TLD1040-24-C1050	1050mA	12-24V	84%
TLD1040-36-C0700	700mA	18-36V	84%
TLD1040-36-C1050	1050mA	18-36V	84%

TLM40 Series

26 Watt Max Constant Current Encapsulated DC/DC Switching Power Supply for Indoor & Outdoor IP66 / NEMA 4 Applications



:: Specifications (@25°C)

Input Characteristics

Input Voltage:	See table

Output Characteristics

Adjustment Range:	Fixed
Current Accuracy:	±5%
Short Circuit Protection:	Auto-Recovery
Output:	See table

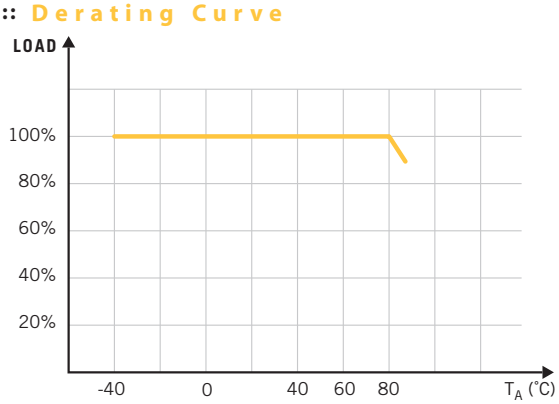
General Specifications

Dimension (LxWxH):	1.26 x 1.22 x 0.59" / 32 x 31 x 15 mm
Weight:	120 g
Reliability (MTBF)	>100k hrs. (Full Load & 25°C Operation)
Warranty:	3 years
Efficiency:	90%

Environmental Specifications

Operating Temperature:	-40~+60°C Full Load, derate 1%/°C from 60~70°C max
Storage Temperature:	-40~+80°C
Cooling:	Convection Cooled Operation
Humidity:	5~95% RH, non-condensing
Vibration:	5 - 50 Hz, 2 G 1 min / cycle, period of 60 min, each axis
Reliability:	>100k Hours MTBF (full load & 25°C)

:: Derating Curve



:: Connector Types

Input: 18 AWG Wire, 5 inch leads
Output: 18 AWG Wire, 5 inch leads

TLM4036DC-0350

Vin (DC)	Vout (DC	IDC (A)	Max Watts
40	2-36	0.350	13.0
36	2-32	0.350	11.2
32	2-28	0.350	9.8
30	2-26	0.350	9.1
28	2-24	0.350	8.4
24	2-20	0.350	7.0
15	2-12	0.350	4.2
12	2-10	0.350	3.5
10	2-8	0.350	2.8

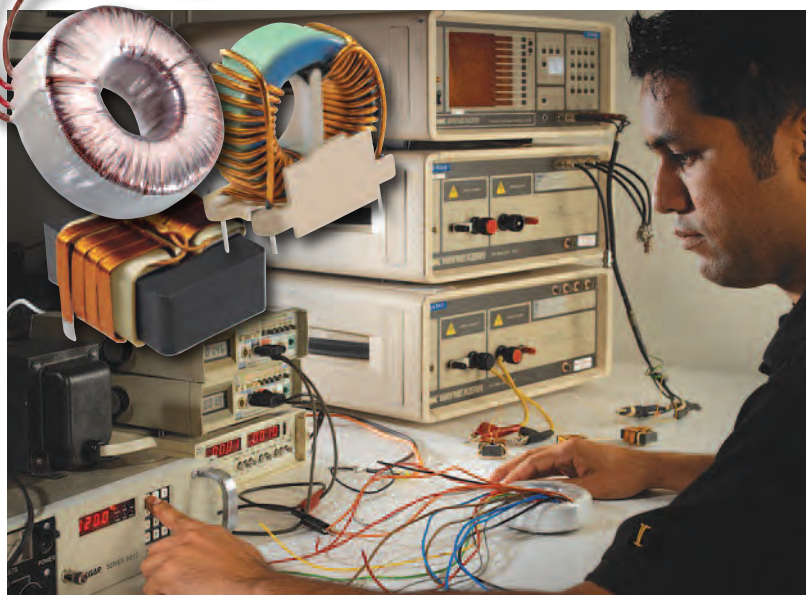
TLM4036DC-700

Vin (DC)	Vout (DC	IDC (A)	Max Watts
40	2-32	0.700	22.4
36	2-30	0.700	21.0
32	2-28	0.700	19.6
30	2-26	0.700	18.2
28	2-24	0.700	16.8
24	2-22	0.700	15.4
15	2-12	0.700	8.4
12	2-10	0.700	7.0
10	2-8	0.700	5.6

TLM4036DC-1000

Vin (DC)	Vout (DC	IDC (A)	Max Watts
30	2-26	1.0	26.0
28	2-24	1.0	24.0
24	2-20	1.0	22.0
15	2-12	1.0	13.0
12	2-10	1.0	10.0
10	2-8	1.0	9.0

Custom Magnetics Solutions.



:: Custom magnetic specialists

While standard transformers and inductors meet most of today's typical electronic circuit requirements, they have their limitations. If you're designing advanced equipment for the automation, computer, industrial controls, medical, networking, telecom, alternative energy, or other industries, then you may need a custom magnetics solution. The best time to make that decision is early in the design process, which gives you the maximum flexibility.

Triad Magnetics specializes in custom magnetics technology solutions. We're a global leader in the design and manufacture of transformers and inductors for industrial, commercial and consumer applications. Our expert engineering staff, modern test labs, automated factories, certified quality, excellent service and competitive cost ensure your success. Bring us your next applications challenge, and we're ready with advanced magnetics technology solutions.

:: Your local design center

This facility houses our standard product magnetics business, which is sold directly through our extensive distributor network and finds application in a wide range of industrial, commercial and consumer devices. The Triad customer service, field applications engineering and design engineering staff offers hundreds of years of collective experience in magnetic components. We also utilize the latest in automated design, laboratory testing, manufacturing software and equipment.

:: Power, switching and filtering applications

As industrial, commercial and consumer equipment continues to become smarter, smaller and faster, the importance of power management and filtering continues to grow in circuit designs. Today's newest IC and ASIC based circuit designs require sophisticated magnetic components to support higher power, higher frequencies, higher densities and much more.

With operating frequencies spiraling upward in new equipment, power supply designers, for example, must now consider the characteristics of magnetic components, as their effectiveness varies based on switching frequency and the application. There are also new parameters to consider when selecting magnetics for: isolation, energy storage, current sensing and more. At Triad, we're ready to help with our expert engineers in fully equipped facilities.

:: **Design Centers:** US and Taiwan
:: **Prototype Labs:** US, China and Taiwan
:: **Production:** US and China

Magnetics Design Process

- Circuit Design Review
- Magnetics Specification
- Physical Size
- Turns Ratio
- Wire Selection
- Design Optimization
- Preliminary Specification
- Rapid Prototyping
- Environmental Testing
- Certifications

Let us help you by asking the right questions to develop a custom magnetics component that meets your performance, reliability, long-life and cost requirements. Our capabilities include designing to a wide range of internationally recognized quality and performance standards:

:: UL Insulation System Classes B (130º C) through R(220º C)
:: FCC Part 68
:: CSA
:: ISO9001-2000
:: TUV, VDE, CE, IEC
:: CSA
:: Mil-T-27E

:: The experience factor

We have often heard systems design engineers refer to the Magnetics design engineering

Designed for Performance and Reliability.

process as "black magic" or a mixture of intuition and mathematics. This marriage of creative thought and number crunching has taken up permanent residence at Triad where

it is not really "black magic," but a direct result of what we call the *Experience Factor*.

There are multiple variables in transformer design, i.e., core material, flux density, frequency, winding structure, distributed capacitance, load requirements, regulation, inductance, reflected impedance, distortion, and mechanical considerations. These variables all interact with each other in such a manner that one cannot change without changing another. These and other interacting factors are all turned over and over in the "black magic" melting cauldron that is the collective mind of our engineering staff.

Activated by the education of mathematics and tempered with the creativity of years of practice, the magnetics engineering Experience Factor quickly place all the variables in their proper perspective, resulting in a product design that is functional, reliable, efficient and replicable. The next time you have a magnetics requirement and are looking for someone to perform the "black magic" on your design, remember the Experience Factor and call Triad.

When you bring a custom project to Triad, we will guide you from a review of youdendrift design requirements to the final delivery of your first production order. Our concurrent design engineering process can assist you in two important ways:

- By designing-in critical design performance advantages that help you achieve performance and cost advantages.
- By speeding time-to-market with compressed design, qualification and procurement cycles for rapid ROI.

Our company's modern corporate headquarters facility in Taiwan includes advanced R&D, test lab and prototyping facilities to support our design centers in the U.S. and around the globe. Your design will be reviewed early in the process by our production engineers to ensure its compatibility with the automated assembly lines at our factory in Qing Xi, China, which include:

- Dedicated Customer Custom Magnetics Assembly Lines
- Standard Product Transformer Assembly Lines
- Standard Product Inductor Assembly Lines
- Integrated Product PCB Assembly Lines

In addition to ISO9001-2000 certification, we are dedicated to a continuous improvement process based on Kaizen principles. We are constantly refining all aspects of our business based on the Kaizen 5S Disciplines that include:

- **Sorting:** Keeping our work areas free of unnecessary clutter
- **Setting In Order:** Organizing our assembly line work flows
- **Shining:** Maintaining all equipment for peak performance
- **Standardizing:** Documenting all process methodologies
- **Sustaining:** Auditing our performance to our own standards

Our China manufacturing facility employs more than 2,000 people, who are well educated and trained in all aspects of electronics manufacturing. Our staff is highly trained, motivated and rewarded when the company meets its business objectives.

Our precision core gapping machines allow us to control performance characteristics with computer accuracy, making it possible to modify standard materials without assistance from external core vendors.

Wire winding
Our CNC wire winding machines ensure reliable, high-quality coils and bobbins. They are designed to process fine to heavy gauge wire from 54 to 4 AWG.

High-temperature soldering
We use fine pitch solder printing machines and high temperature soldering equipment. Lead-free processes meet environmental requirements including ROHS.

Inspection
Automated optical inspection and in-line circuit testing systems are located throughout the manufacturing process for high quality and reliability.

Environmental Testing
Our environmental test chambers ensure that our product meets your operating specifications for resistance to temperature, shock, humidity and vibration to MIL-T-27E criteria or higher upon request.

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