

COMMON MODE CHOKE CATALOG

For DataCom and Power Applications



Click on blue-outlined text with the "hand tool" to navigate these sections.
Use the "next page" or "previous page" menu buttons to navigate the pages.

TABLE of CONTENTS

Common Mode Chokes for Datacom Applications

Surface Mount Common Mode Chokes	2-6
Through Hole Common Mode Chokes	7-12

Common Mode Chokes & Inductors for Power Applications

Self-Leaded, SMT Common Mode Chokes & Inductors	13-14
Self-Leaded, SMT Common Mode Inductors	15-16
Common Mode EMI Suppression Inductors	17
500 kHz Common Mode Inductors	18

SELF-LEADED, SMT COMMON MODE CHOKES

Suited for Power Applications



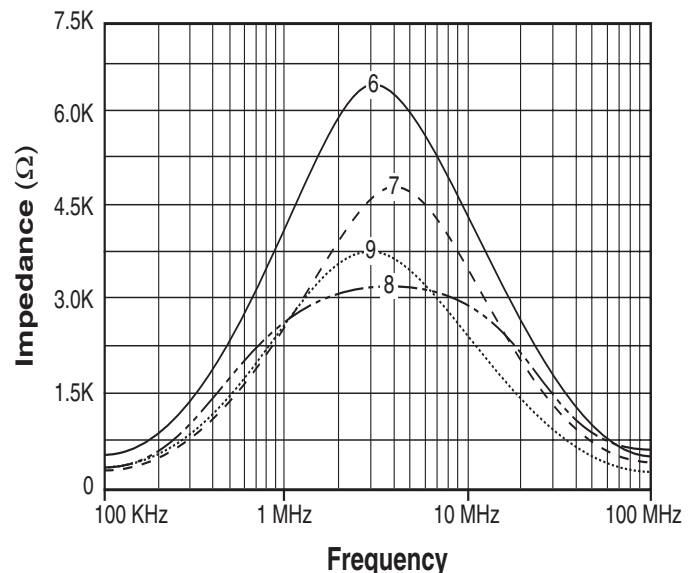
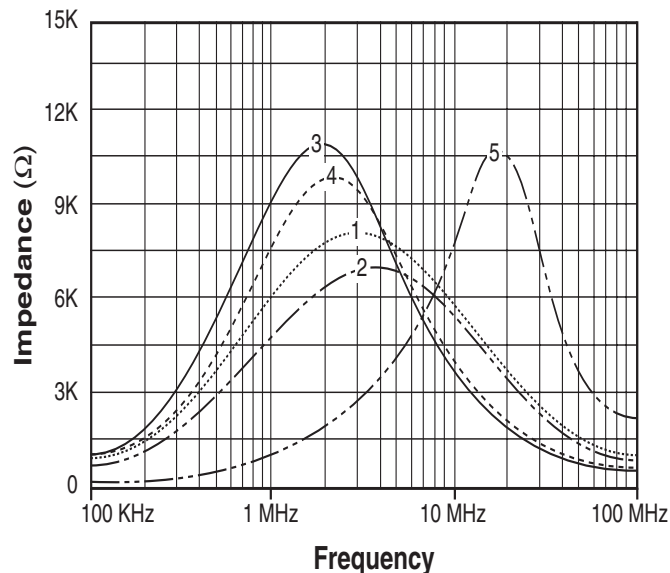
-  Solutions based on impedance, size and current
-  Designed for DC/DC converters
-  Wide variety of inductor sizes and current ratings available
-  Dielectric strength: 500 V_{RMS}

Electrical Specifications @ 25°C — Operating Temperature -40°C to +120°C

Part Number	Rated Current For 55°C Rise (Amps)	Inductance (mH ±35%)	Leakage Inductance ¹ @ 100 kHz (μH NOM)	DCR (MAX) (mΩ)	Impedance Curve (see # below)	Package	Weight (Grams)	Quantity In Tube	Quantity In Reel
P0354	1.22	1.170	8.296	200	1	Polecat	1.4	40	500
P0473	1.63	0.884	5.807	110	2	Polecat	1.5	40	500
P0351	2.80	1.470	9.630	80	3	LCCI-50	4.3	30	200
P0420	3.30	1.320	8.130	60	4	LCCI-50	4.6	30	200
P0421	3.30	0.225	8.175	60	5	LCCI-50	4.7	30	200
P0422	4.70	0.768	4.559	40	6	LCCI-50	4.9	30	200
P0353	5.60	0.590	3.891	20	7	LCCI-50	5.2	30	200
P0527	7.20	0.530	4.536	15	8	HCCI-68	7.7	20	100
P0429	9.70	0.809	7.408	14	6	Big Foot	13.5	15	75
P0469	11.6	0.630	5.482	10	7	Big Foot	14.3	15	75
P0502	14.0	0.473	4.531	8	9	Big Foot	14.8	15	75

NOTE: Add suffix "T" to part number for tape and reel package (i.e. P0354T). 1. Leakage Inductance tested @ 100 kHz, 1140 mV, (1-2) with (3-4) shorted.

Impedance Curves



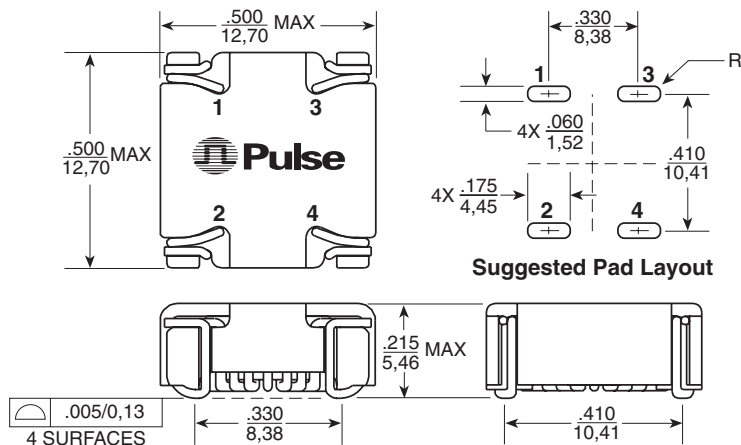
SELF-LEADED, SMT COMMON MODE CHOKES

Suited for Power Applications

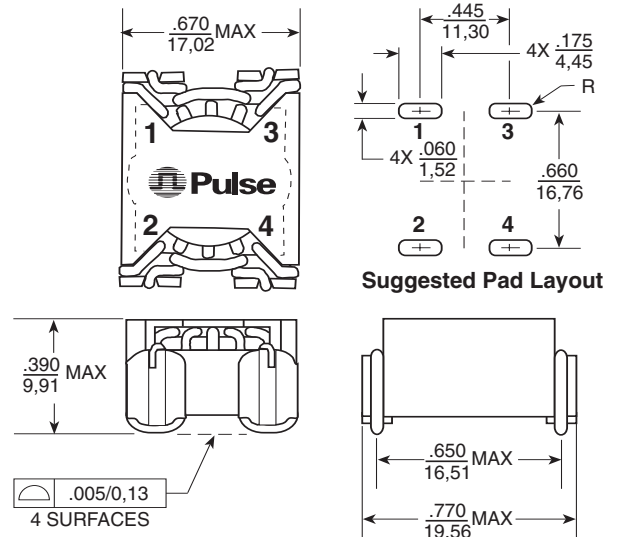


Mechanicals

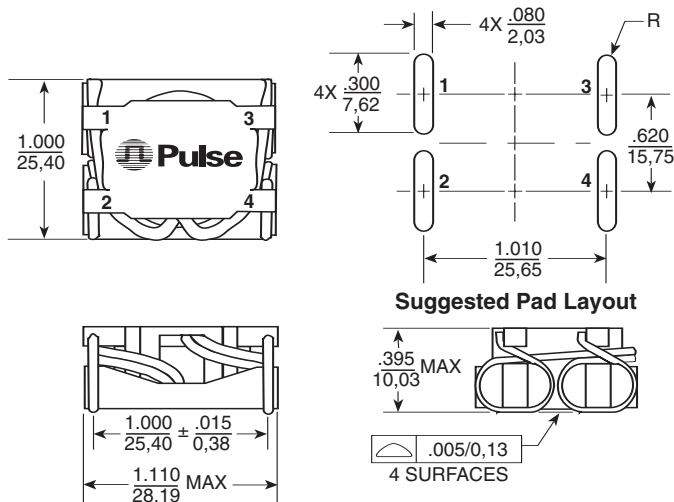
Polecat



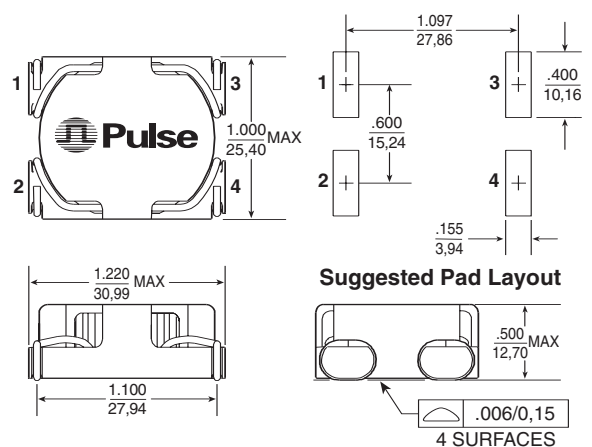
LCCI-50



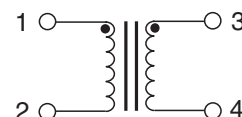
HCCI-68



Big Foot



Schematic



Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.005}{0,13}$

SELF-LEADED SMT COMMON MODE INDUCTORS

Suited for Power Applications



-  Pick and place compatible
-  Rated voltage 250Vac
-  Low RFI toroid
-  Tape & Reel packaging available
-  VDE approval and U.L. recognition pending

Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C

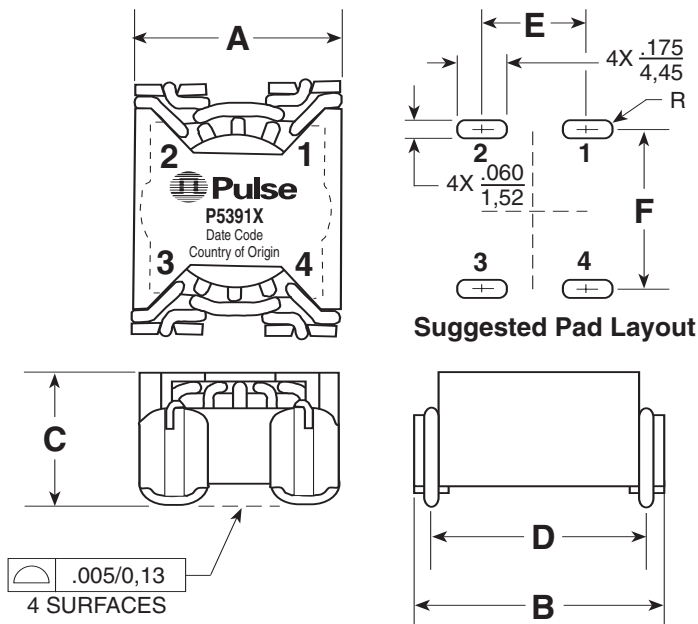
Part Number	I RMS (Amps)	Inductance (mH $\pm 30\%$)	Leakage Inductance ¹ @ 100 kHz (μ H NOM)	DCR (MAX) (m Ω)	SRF (MHz)	Impedance Curve (see back page)	Size Code	Weight (Grams)	Quantity In Tube
PE-53910	3.60	1.0	3.166	50	4	1	LCCI-3	5.3	30
PE-53911	1.50	1.0	3.960	60	2	2	LCCI-1	2.5	40
PE-53912	2.50	3.0	9.297	80	2.2	3	LCCI-3	5.2	30
PE-53913	1.00	10.0	39.390	450	0.5	4	LCCI-1	2.4	40
PE-53914	0.50	22.0	60.660	850	0.3	5	LCCI-1	2.4	40

NOTE: Add suffix "T" to part number for tape and reel package (i.e. P0354T). 1. Leakage Inductance tested @ 100 kHz, 1140 mV, (1-2) with (3-4) shorted.

Mechanical

Schematic

PE-5391X



Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

Size	A	B	C	D	E	F
LCCI-1	.560/14,22	.645/16,38	.350/8,89	.520/13,21	.340/8,64	.530/13,46
LCCI-3	.670/17,02	.770/19,56	.390/9,90	.650/16,51	.445/11,30	.660/16,76

SELF-LEADED SMT COMMON MODE INDUCTORS

Suited for Power Applications



Performance Description

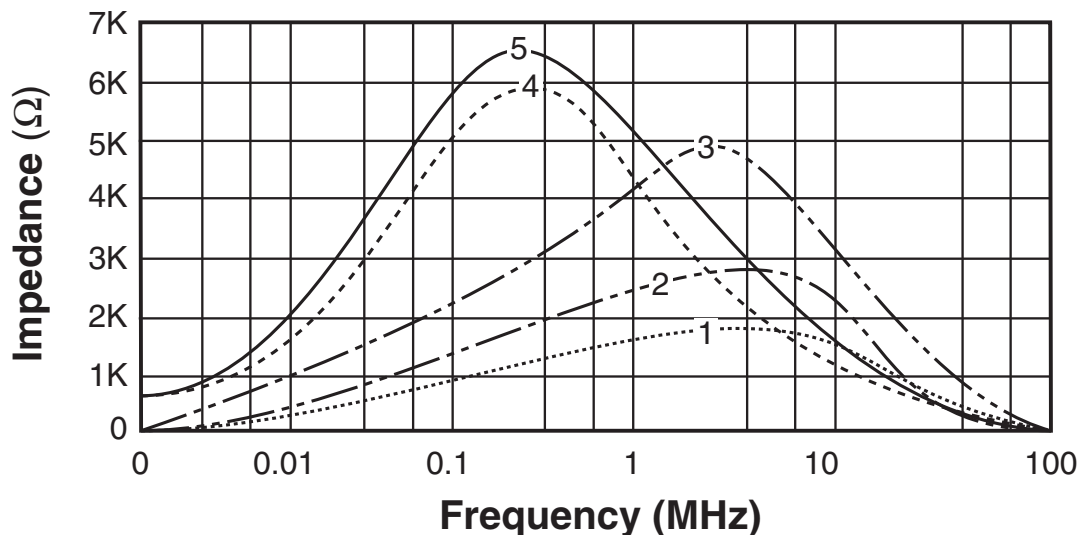
The common mode choke family has been developed to attenuate conductor noise (EMI) in systems. The designs on high permeability toroidal cores, performs two different filter functions. There is one winding for each of the two polarity lines with the inductors coupled by a single core.

Common mode signals (referred to ground) are

suppressed by the full inductance of each coil. As an added benefit, differential signals are attenuated by the leakage inductance of the windings.

The full inductance in connection with capacitances (0.1 to 1 μ F) connected to earth ground will yield filtering results required for switch mode power supplies.

Impedance Curves



Application Notes

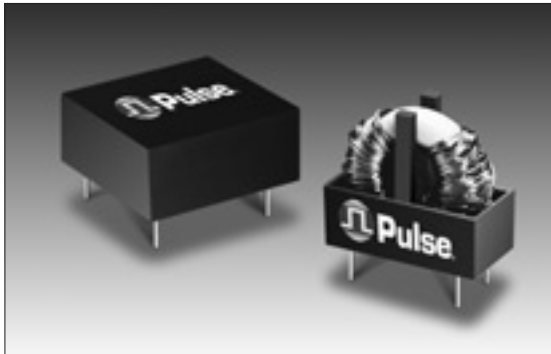
Pulse can assist you with successful solutions to pass world EMI/EMC standards such as FCC, VDE & IDE. Our safe and cost effective products span the application spectrum. EMI/EMC Control products include low power signal filtering devices, toroidal inductor product

families and a wide selection of VDE/UL approved common mode chokes.

Please call our applications engineering locations for EMC technical support services including catalogs, samples, measurements, screenroom testing or design assistance.

COMMON MODE EMI SUPPRESSION INDUCTORS

Suited for Power Applications



-  Low profile or vertical mounting available
- Windings balanced within one percent
-  For use in switching power supply input filter circuits
-  Dielectric strength 1250 V_{RMS}
-  Designed with 3.0 mm minimum creep distance between windings

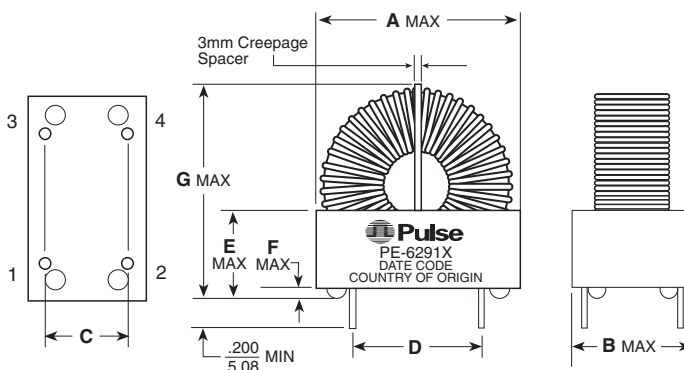
Electrical Specifications @ 25°C— Operating Temperature -30° to +130° C

Low Profile Part Number	Vertical Mount Part Number	Rated RMS Current ¹ (Amps)	Load VA ² at RMS Line		Inductance at 1 kHz (mH MIN)	Test Level Volts RMS 1.0 kHz	Leakage Inductance 130 kHz (μH MIN)	DCR Max. each WDG (Ω)	Package Number	Lead Diameter Inches ± .003	
			117 V	220 V						Low Profile	Vertical Mount
PE-62891	PE-62911	1.8	210	420	10.0	0.50	130	0.240	1	0.032	0.032
PE-62892	PE-62912	3.5	400	800	3.0	0.20	35	0.060	1	0.032	0.032
PE-62893	PE-62913	6.0	700	1400	1.0	0.08	12	0.020	1	0.036	0.036
PE-62894	PE-62914	2.6	300	600	16.0	1.00	180	0.160	2	0.032	0.040
PE-62895	PE-62915	3.2	375	750	8.0	0.50	90	0.120	2	0.032	0.040
PE-62896	PE-62916	5.2	600	1200	4.0	0.20	45	0.040	2	0.036	0.036
PE-62897	PE-62917	7.5	875	1750	2.0	0.08	25	0.020	2	0.047	0.047

NOTES: 1. Rated RMS current for 40°C rise at any input voltage. 2. Caution — do not exceed rated RMS current ratings.

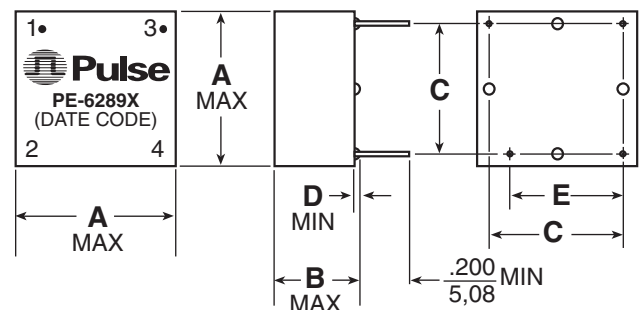
Mechanicals

Vertical Package



Package Number	A	B	C	D	E	F	G
1	1.15 29,21	.550 13,97	.400 10,15	.800 20,32	.45 11,43	.015 0,38	1.15 29,21
2	1.44 36,57	.800 20,32	.600 15,24	.900 22,86	.70 17,78	.030 0,76	1.50 38,10

Low Profile Package



Package Number	A	B	C	D	E
1	1.25 31,75	.600 15,24	1.00 25,40	.015 0,38	.900 22,86
2	1.50 38,10	.800 20,32	1.28 32,51	.010 0,25	1.083 27,50

Schematic

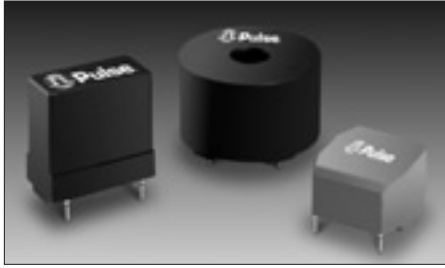


Unless otherwise specified, all tolerances are ± .010
0,25

Dimensions: Inches
mm

500 kHz COMMON MODE EMI INDUCTORS

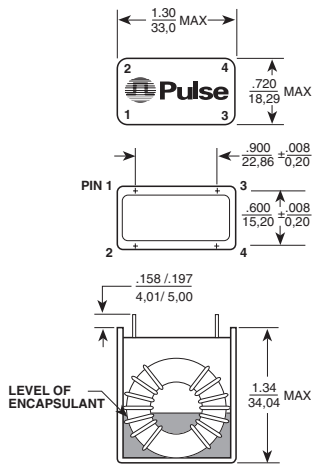
Suited for Power Applications



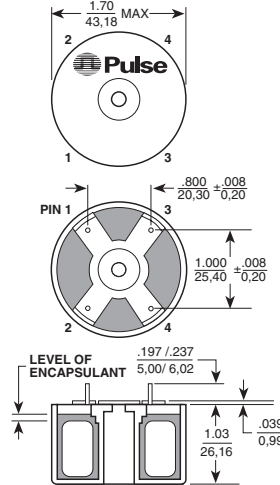
-  Common mode EMI Inductors
-  Designed for higher frequency power conversion
-  For use in SMPS input filtering circuits

Mechanicals

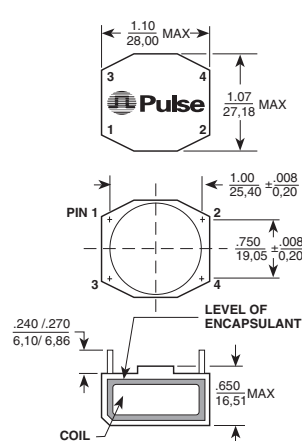
CASE 1¹



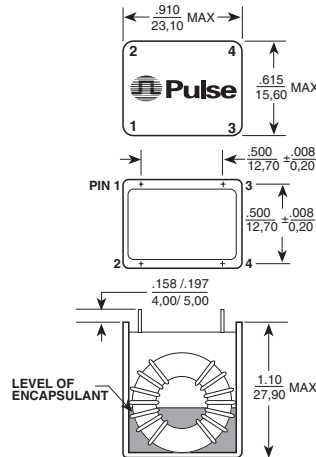
CASE 2²



CASE 3¹



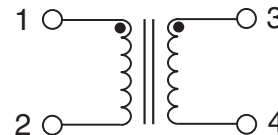
CASE 4¹



Elect. Specs. @ 25°C— Operating Temp. -30° to +130° C

Part Number	Rated RMS Current (A.Normal)	Inductance mH (± 30%)	DCR (Ω MAX)	Case Style	Leakage Inductance (MIN/MAX μH)
PE-96161	0.5	33	1.40	3	160/320
PE-96165	1.0	18	0.50	1	120/320
PE-96166	1.0	5.6	0.30	3	30/60
PE-96168	2.0	15	0.29	1	100/220
PE-96173	3.15	5.6	0.10	1	40/80
PE-96175	3.15	3.3	0.07	3	15/35
PE-96177	3.15	2.2	0.06	3	10/20
PE-96178	3.15	1.2	0.04	3	6/15
PE-96179	3.15	1.2	0.04	4	5/14
PE-96181	5.0	3.9	0.06	1	25/60
PE-96186	6.3	2.7	0.04	1	20/45
PE-96187	8.0	3.3	0.033	2	20/45
PE-96188	10.0	1.8	0.02	2	10/25
PE-96189	12.5	1.5	0.015	2	10/20
PE-96190	15.0	1.0	0.01	2	7/15

Schematic



- NOTES: 1. Leads have .031/.039 / .700/.900 diameter.
2. Self-leads: **96187** has .036 nom. diameter leads.
96188 & 96189 have .045 nom. diameter leads.
96190 has .051 nom. diameter leads.

Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

For More Information :

UNITED STATES (Worldwide)

12220 World Trade Drive
San Diego, CA 92128
U.S.A.
<http://www.pulseeng.com>
TEL: 858 674 8100
FAX: 858 674 8262

UNITED KINGDOM (Northern Europe)

1 & 2 Huxley Road
The Surrey Research Park
Guildford, Surrey GU2 5RE
United Kingdom
TEL: 44 1483 401700
FAX: 44 1483 401701

FRANCE (Southern Europe)

Zone Industrielle
F-39270
Orgelet
France
TEL: 33 3 84 35 04 04
FAX: 33 3 84 25 46 41

SINGAPORE (Southern Asia)

150 Kampong Ampat
#07-01/02
KA Centre
Singapore 368324
TEL: 65 287 8998
FAX: 65 280 0080

TAIWAN, R.O.C. (Northern Asia)

3F-4, No. 81, Sec. 1
HsinTai Wu Road
Hsi-Chih, Taipei Hsien
Taiwan, R.O.C.
Tel: 886 2 2698 0228
FAX: 886 2 2698 0948

HONG KONG (China/Hong Kong)

19/F, China United Plaza
1008 Tai Nan West Street
Cheung Sha Wan, Kowloon
Hong Kong, China
TEL: 852 2788 6588
FAX: 852 2776 1055

DISTRIBUTOR

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.

♻️ Printed on recycled paper. Copyright ©2002, Pulse Engineering, Inc. All rights reserved.