

COMMON MODE CHOKE CATALOG

For DataCom and Power Applications



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SELF-LEADED, SMT COMMON MODE CHOKES

Suited for Power Applications



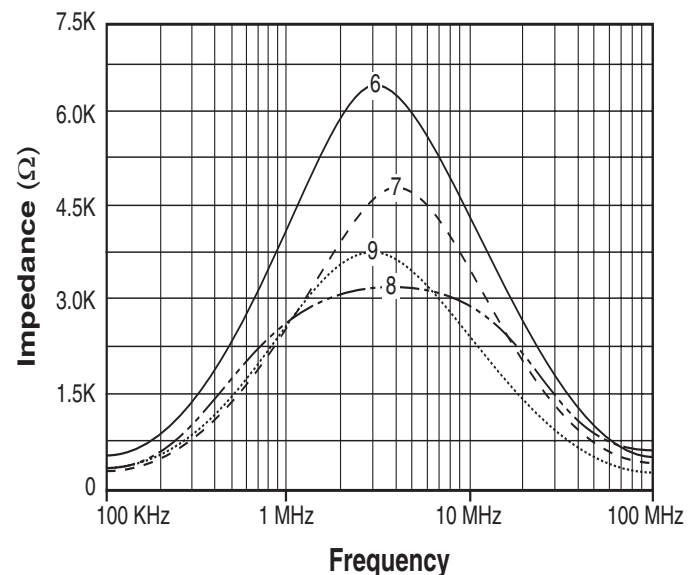
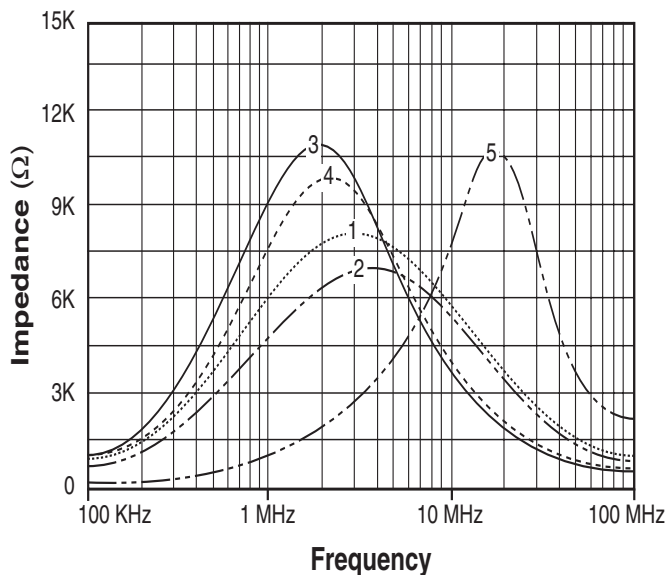
-  Solutions based on impedance, size and current
-  Designed for DC/DC converters
-  Wide variety of inductor sizes and current ratings available
-  Dielectric strength: 500 V_{RMS}

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



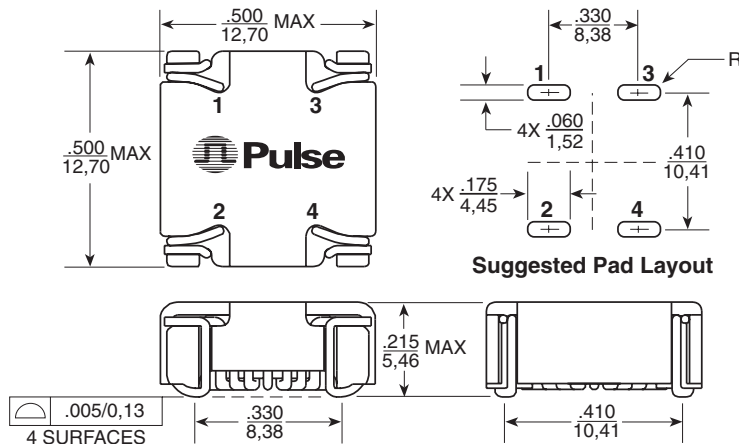
SELF-LEADED, SMT COMMON MODE CHOKES

Suited for Power Applications

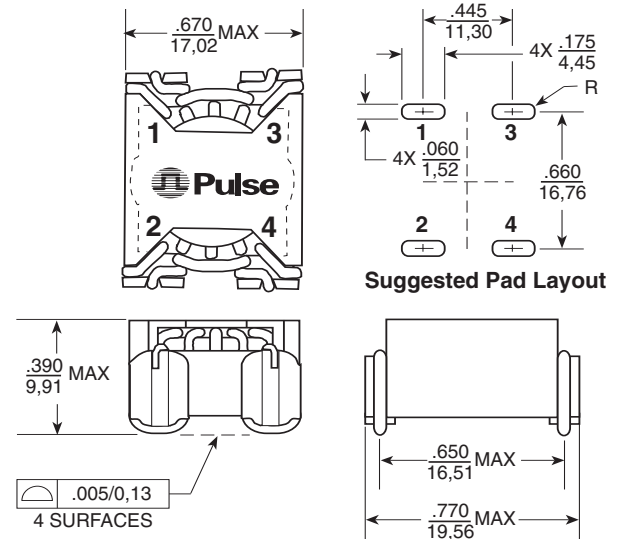


Mechanicals

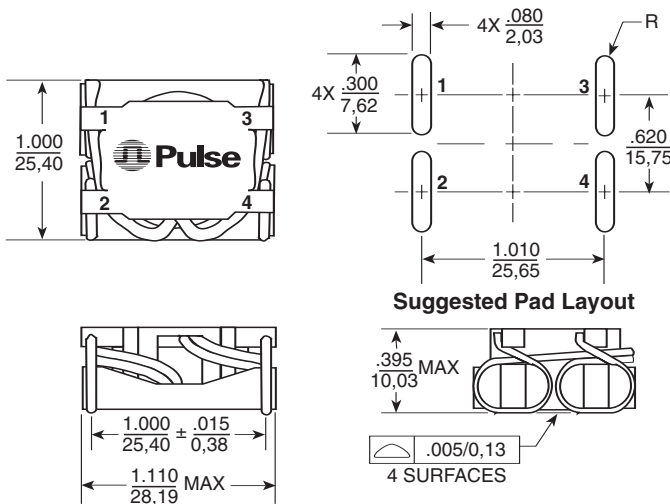
Polecat



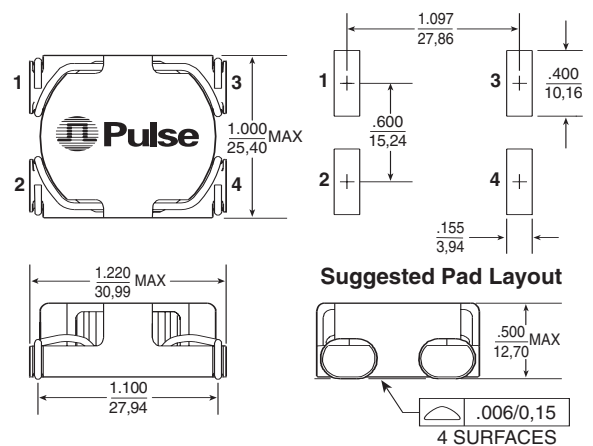
LCCI-50



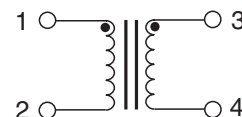
HCCI-68



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

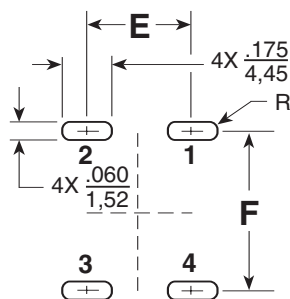
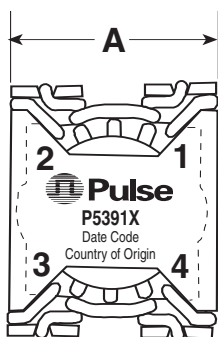
Part Number	I RMS (Amps)	Inductance (mH ±30%)	Leakage Inductance ¹ @ 100 kHz (μH NOM)	DCR (MAX) (mΩ)	SRF (MHz)	Impedance Curve (see back page)	Size Code	Weight (Grams)	Quantity In Tube
PE-53910	3.60	1.0	3.166	50	4	1	LCCI-3	5.3	30
PE-53911	1.50	1.0	3.960	60	2	2	LCCI-1	2.5	40
PE-53912	2.50	3.0	9.297	80	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.

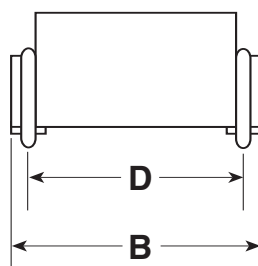
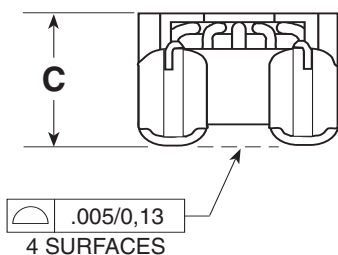
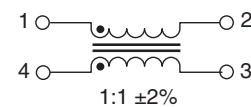
Mechanical

Schematic

PE-5391X



Suggested Pad Layout



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	.350/8,99	.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



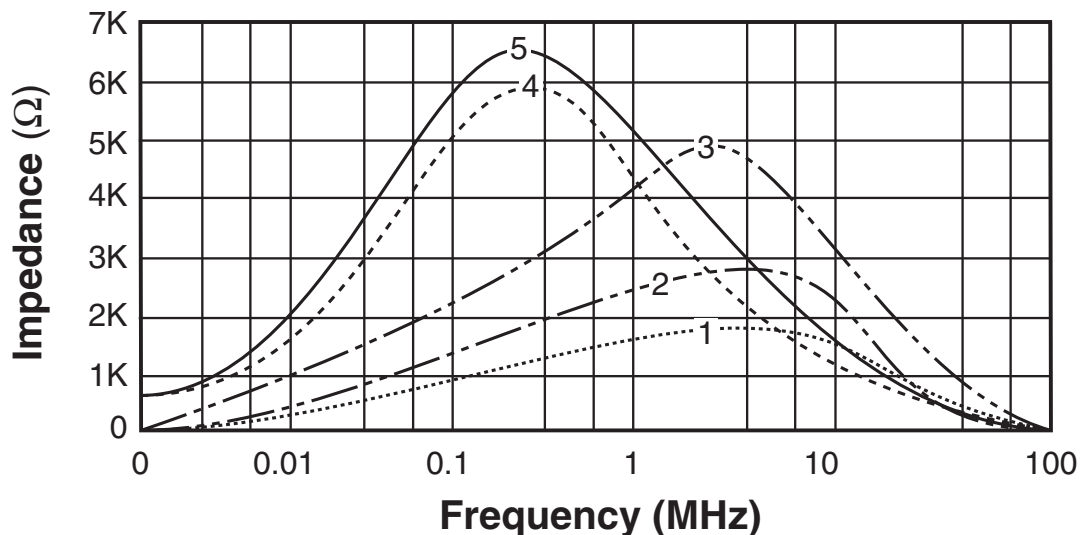
Performance Description

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

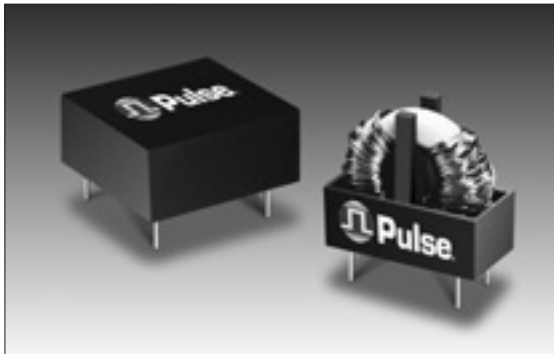
families and a wide selection of VDE/UL approved common mode chokes.

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

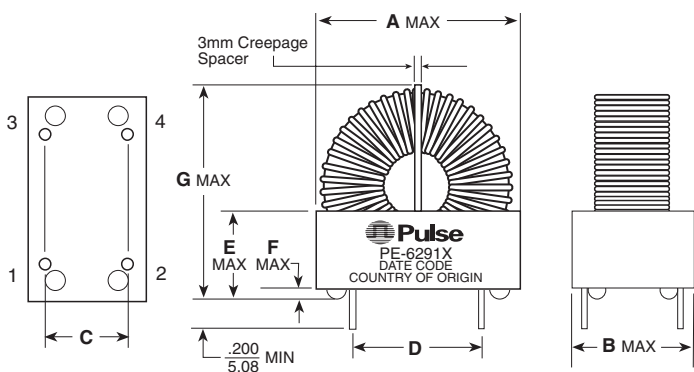
Electrical Specifications @ 25°C— Operating Temperature -30° to +130° C

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.

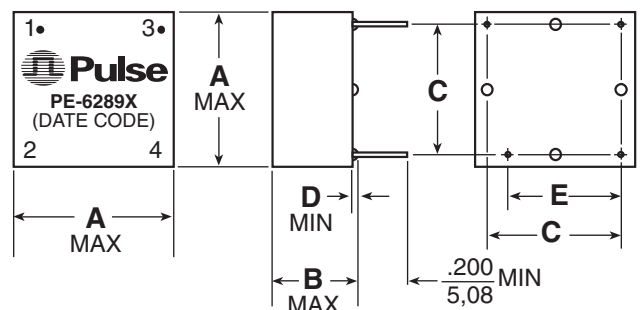
Mechanicals

Vertical Package



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

Low Profile Package



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

Schematic



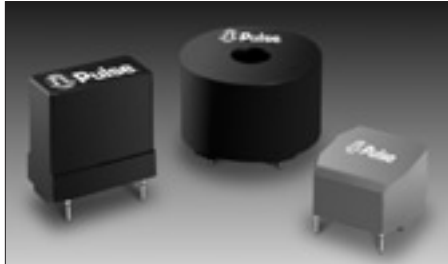
Unless otherwise specified, all tolerances are ± $\frac{.010}{0,25}$




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



500 kHz COMMON MODE EMI INDUCTORS

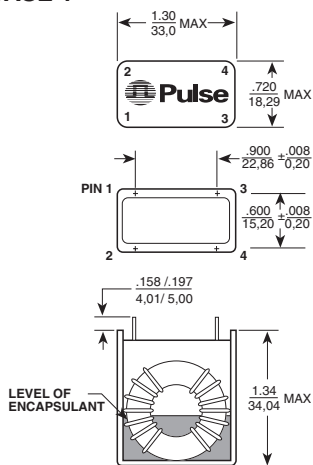
Suited for Power Applications



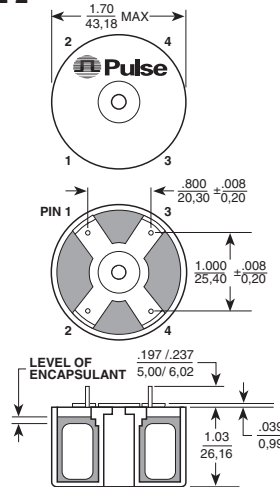
-  Common mode EMI Inductors
-  Designed for higher frequency power conversion
-  For use in SMPS input filtering circuits

Mechanicals

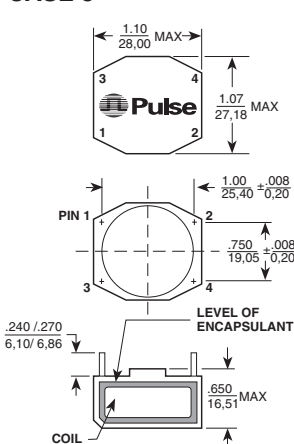
CASE 1¹



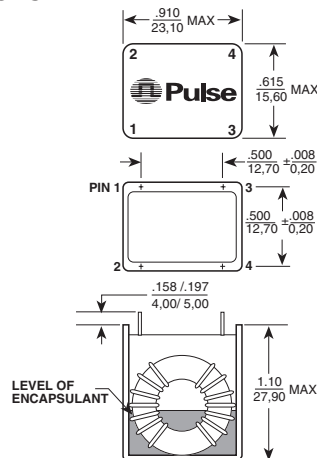
CASE 2²



CASE 3¹



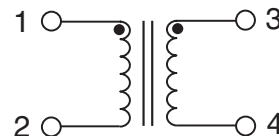
CASE 4¹



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 $\frac{.031}{.039}$ / $\frac{.700}{.900}$ diameter.
 2. Self-leded: **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 $\pm \frac{.010}{0.25}$

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