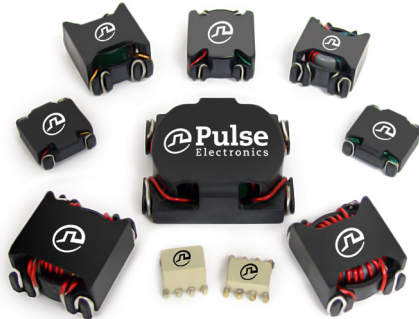


SMT Common Mode Chokes

Shasta and SLIC



- Ⓢ Wide variety of package sizes available
- Ⓢ Current Rating: 0.5Arms to 16Arms
- Ⓢ Inductances Range: 61uH to 22mH
- Ⓢ Dielectric strength: 1500Vrms
- Ⓢ Insulation: Functional
- Ⓢ Voltage Rating: Up to 800Vdc

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

Part Number		Irated ¹ (A)	Inductance (uH +/-35%) ⁴	DCR per winding (mOhms Max)	Leakage Inductance (uH Typ)	Capacitance (pF Typ)	Self Resonant Frequency (MHz Typ)	Impedance at SRF (KΩ Typ)	Voltage Rating (Vdc)
Commercial ¹	Automotive								
Low Shasta - Size: 9.1mm x 8.9mm x 3.8mm MAX, Weight: 0.3g MAX									
PA2741NL	PM2741NL	1.4	94**	30	0.3	3.9	15	0.45	500
High Shasta - Size: 9.1mm x 8.9mm x 7.9mm MAX, Weight: 0.6g MAX									
PA2742NL	PM2742NL	1.0	397**	92	0.8	7.8	6	1.5	500
Polecat - Size: 13.5mm x 13.5mm x 5.6mm MAX, Weight: 1.7g MAX									
PO354NL	PM0354NL	1.2	1,170	200	9.0	7.0	3	8.20	400
PO473NL	PMCO473NL	1.5	880	110	6.0	6.9	4	6.76	400
PA2748NL	PM2748NL	2.3	1,125**	55	4.2	7.5	4	3.20	400
PA2743NL	PM2743NL	4.3	383**	18	1.8	4.6	2.5	1.40	400
PA2744NL	PM2744NL	4.8	280**	13.2	1.1	6.2	2	1.00	400
PA2745NL	PM2745NL	5.8	130**	6.75	0.7	4.4	3	0.50	400
PA2746NL	PM2746NL	8.5	96**	4.3	0.4	4.3	4	0.35	400
PA2747NL	PM2747NL	11	61**	2.9	0.3	4.3	4	0.20	400
Polecat-HP - Size: 13.0mm x 13.0mm x 8.6mm Weight: MAX, 2.5g MAX									
PA3927NL	PM3927NL	3.3	800**	27	2.5	3.9	1.6	3.00	400
LCCI-37 - Size: 16.4mm x 14.2mm x 8.9mm Weight: MAX, 2.4g MAX									
PE-53914NL	PM53914NL	0.5	22,000*	850	59	8.6	0.51	23.0	800
PE-53913NL	PM53913NL	0.8	10,000*	450	43	6.3	0.46	20.0	800
PE-53911NL	PM53911NL	2.1	1,500*	60	4.3	4.2	3	2.80	800
PA2749NL	PM2749NL	4.2	536**	17.1	1.7	4.3	2	1.40	400
LCCI-44LP - Size: 18.2mm x 15.0mm x 7.6mm Weight: MAX, 3.0g MAX									
PA2751NL	PM2751NL	4.2	486**	16	1.8	3.9	2	1.50	400
LCCI-44 - Size: 18.2mm x 15.0mm x 10mm MAX, Weight: 3.5g MAX									

SMT Common Mode Chokes

Shasta and SLIC

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

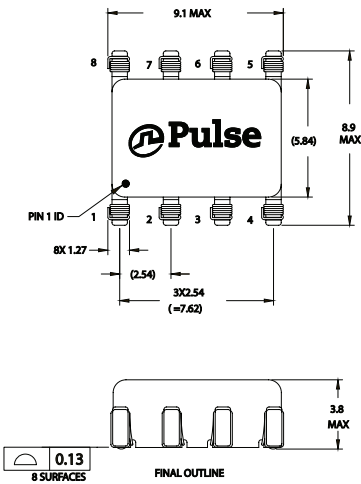
Part Number		I _{rated} ¹ (A)	Inductance ($\mu\text{H} \pm/-35\%$) ⁴	DCR per winding (mOhms Max)	Leakage Inductance ($\mu\text{H Typ}$)	Capacitance (pF Typ)	Self Resonant Frequency (MHz Typ)	Impedance at SRF (K Ω Typ)	Voltage Rating (Vdc)
Industrial	Automotive								
Commercial	Automotive								
PA2750NL	PM2750NL	6.5	400**	9.4	1.4	4.8	2.6	1.10	400
LCCI-50 - Size: 19.6mm x 17.0mm x 9.9mm MAX, Weight: 5.0g MAX									
PA2752NL	PM2752NL	1.4	10,150**	210	41	11	0.3	27.5	400
PE-53912NL	PM53912NL	2.1	3,000*	80	9.7	6.7	2	5.00	800
P0351NL	PM0351NL	2.3	1,470	80	11	13	2	11.7	400
P0420NL	PM0420NL	2.8	1,320	60	9.6	11	2.5	9.60	400
P0421NL	PM0421NL	2.8	220	60	9.1	2.1	6.2	8.00	400
PE-53910NL	PM53910NL	3.6	1,000*	50	3.1	5.1	8	1.80	800
P0422NL	PM0422NL	4.0	770	40	5.4	8.2	2.4	5.60	400
P0353NL	PM0353NL	5.0	590	21	4.6	7.8	2.8	4.90	400
PA2756NL	PM2756NL	8.0	484**	7.7	2.5	5.3	4.2	1.00	600
PA2753NL	PM2753NL	13	95**	3	0.5	2.2	1.7	0.34	600
Makeni - Size: 21.1mm x 19.1mm x 11.2mm MAX, Weight: 6.2g MAX									
PA2754NL	PM2754NL	12	215**	3.75	1.3	2.5	2.2	0.68	600
PA2755NL	PM2755NL	17	117**	1.95	0.5	4.0	1.8	0.35	600
HCCI-68 - Size: 28.2mm x 25.8mm x 10.0mm MAX, Weight: 7.3g MAX									
P0527NL	PM0527NL	6.0	530	15	5.0	6.9	3.1	3.70	400
HCCI-80 - Size: 31.0mm x 25.8mm x 12.7mm, Weight: 17.8g MAX									
P0429NL	PM0429NL	7.8	810	14	8.8	11.4	1.7	7.00	600
PA2757NL	PM2757NL	8.5	1,030**	9.75	4.9	7.6	1.0	2.70	600
P0469NL	PM0469NL	8.8	630	10	6.6	9.6	1.8	4.50	600
P0502NL	PM0502NL	12	470	8	5.7	10.1	2.5	3.60	600
PA2670NL	PM2670NL	15	500**	4.25	2.7	8.1	1.4	1.30	600
PG1265NL	PM1265NL	16	380**	4.1	2.9	5.8	4.6	0.55	600

NOTE:

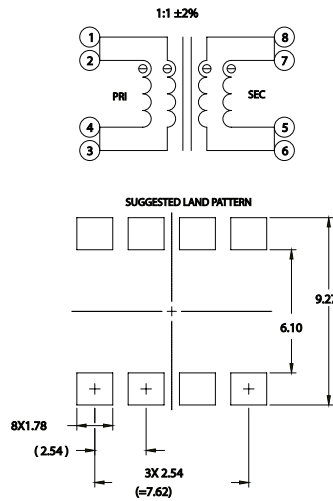
- The current rating (I_{rated}) is based upon the temperature rise of the component and represents the rms current which will cause a typical temperature rise of 50C with free air cooling
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA2741NL becomes PA2741NLT). Pulse complies to industry standard tape and reel specification EIA481.
- Inductance values shown are all nominal $\pm/-35\%$ tolerance, except those identified with an asterisk (*), where the tolerance is -40% min, and with a double asterisk (**) where the tolerance is -40% min just for the automotive grade version.
- The automotive parts in bold font have completed AEC-Q200 qualified and have been launched on an IATF certified production line. The parts in regular font are considered AEC-Q200 compliant based on qualification testing of various designs on these platforms. However, the IATF launch per the Advanced Product Quality Planning (APQP) procedure has not yet been completed.
- Please contact Pulse Electronics if a part is selected for automotive application to ensure APQP and PPAP delivery can be completed in accordance with project milestones. Note that Pulse applies standard AEC-Q200 qualification. If a customer has a vibration requirement beyond this, Pulse may not be able to confirm that requirement with this series. The customer should then consider to conduct their own qualification testing and/or glue the component to the PCB.
- Rated voltage is based on a positive partial discharge test (discharge < 10pC) during the design phase (not production tested) for a repetitive peak voltage (U_{rp}) of this rated voltage. The test condition was with an inception voltage, U₁ = 1.25*U_{rp} and an extinction voltage, U₂ = 1.1* U_{rp}

Mechanicals

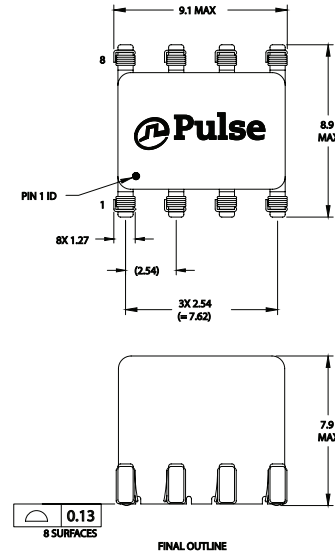
Low Shasta



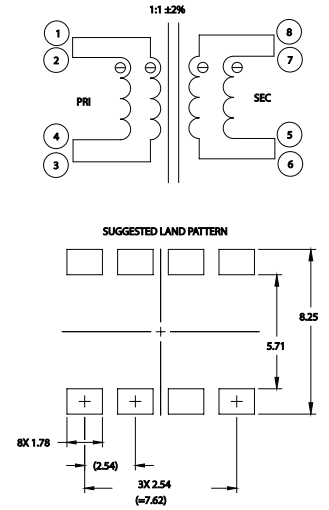
Schematic



High Shasta



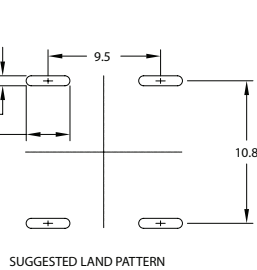
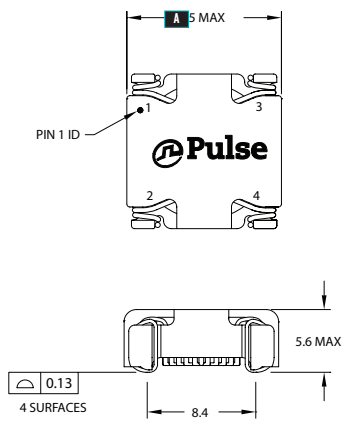
Schematic



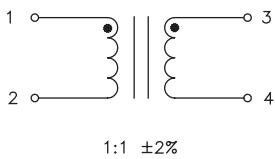
Please note that for PA2741NL and PA2742NL the part should be connected as follows:

Customer to connect pins (1,2) and (4,3) together on board to form a single winding (1,2-4,3).
Customer to connect pins (8,7) and (5,6) together on board to form a single winding (8,7-5,6)
All ratings (leakage and DCR) are with respect to the above winding configuration.

PoleCat



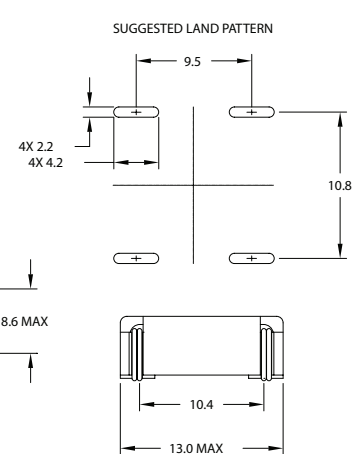
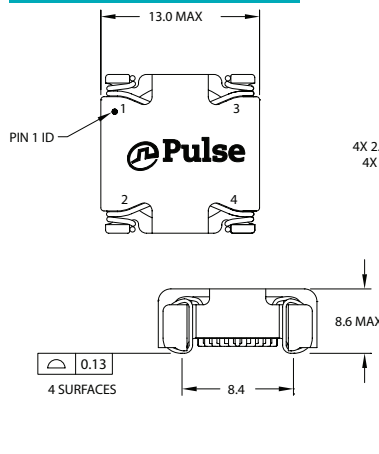
Schematic



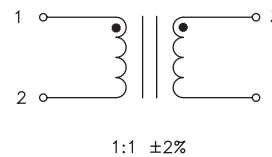
PoleCat Dimensions

Part Number	A	B
P0354NL	12.7	12.7
PC0473NL	12.7	12.7
P2748NL	12.7	13.2
PA2743NL	13.0	13.0
PA2744NL	13.0	13.0
PA2745NL	13.2	13.2
PA2746NL	13.2	13.2
PA2747NL	13.5	13.5
PMxxxxNL	13.5	13.5

PoleCat-HP

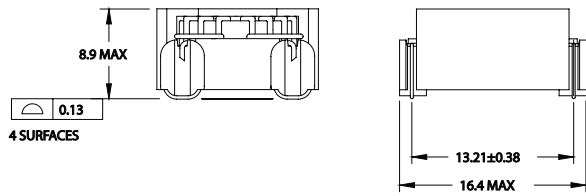
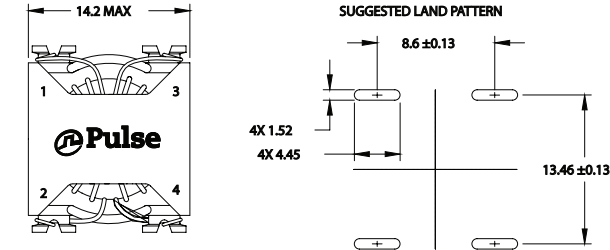


Schematic

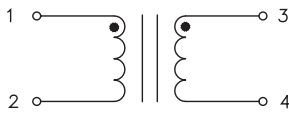


Mechanicals

LCCI-37 - PA2749NL

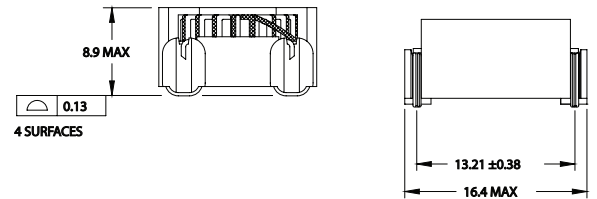
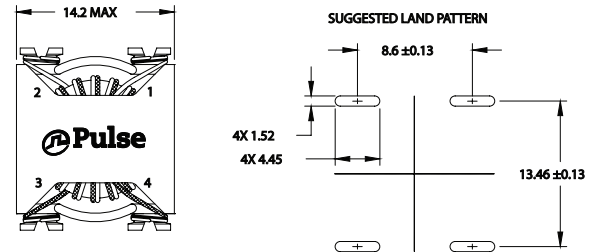


Schematic

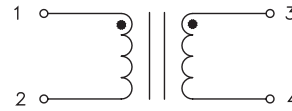


1:1 ±2%

LCCI-37 - PE-539xxNL

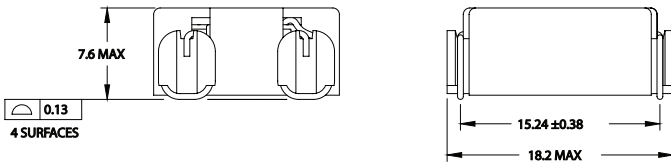
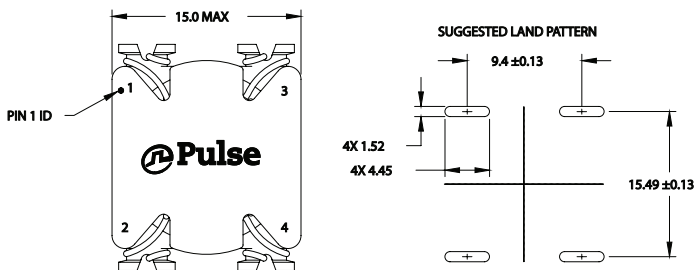


Schematic

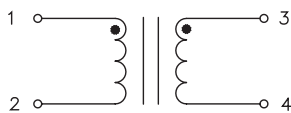


1:1 ±2%

LCCI-44LP

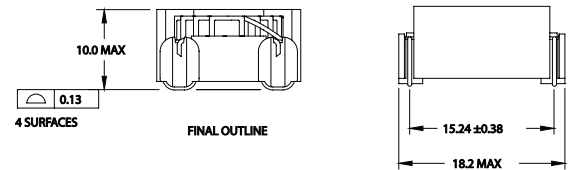
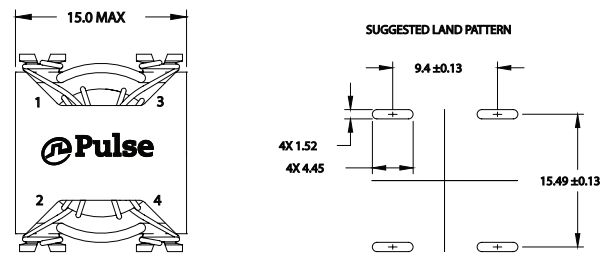


Schematic

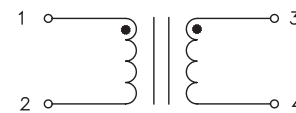


1:1 ±2%

LCCI-44



Schematic

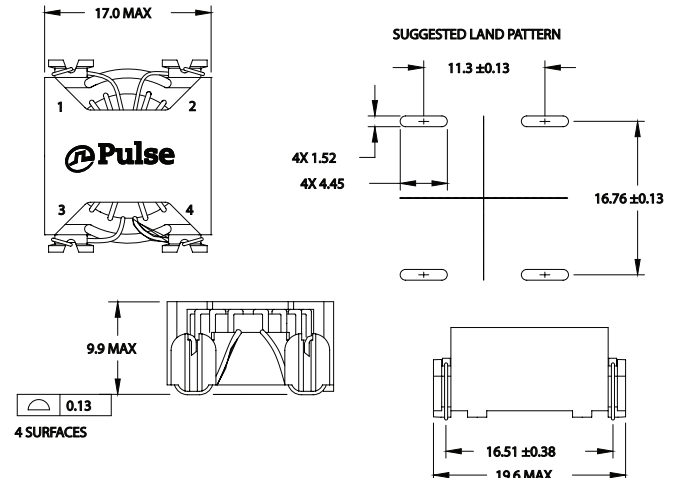
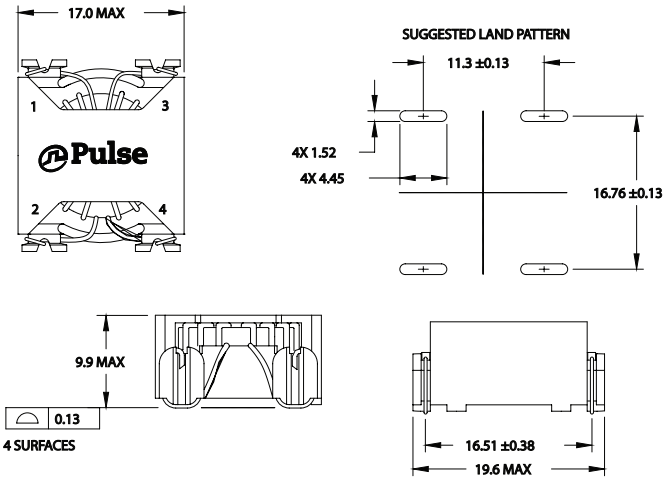


1:1 ±2%

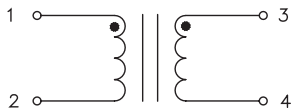
Mechanicals

LCCI-50 - PA2752NL, P0353NL, P0422NL, P0421NL, P0420NL, P0351NL

LCCI-50 - PA2753NL, PA2756NL

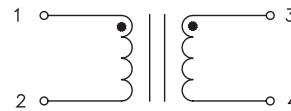


Schematic



1:1 ±2%

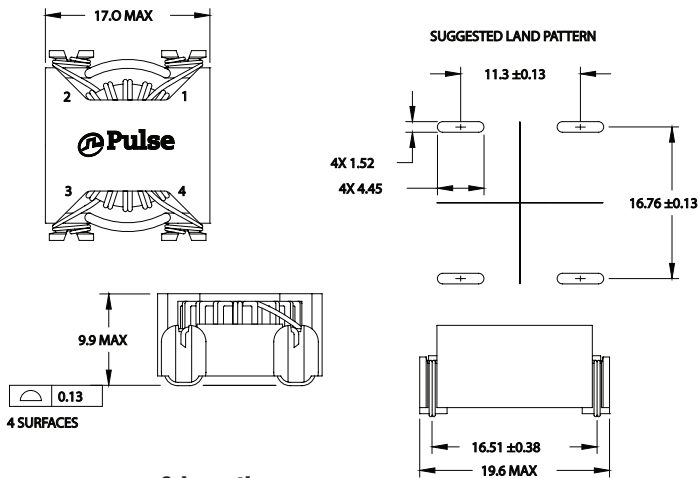
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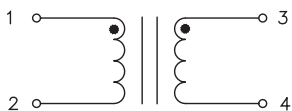
1:1 ±2%

LCCI-50 - PE-539xxNL

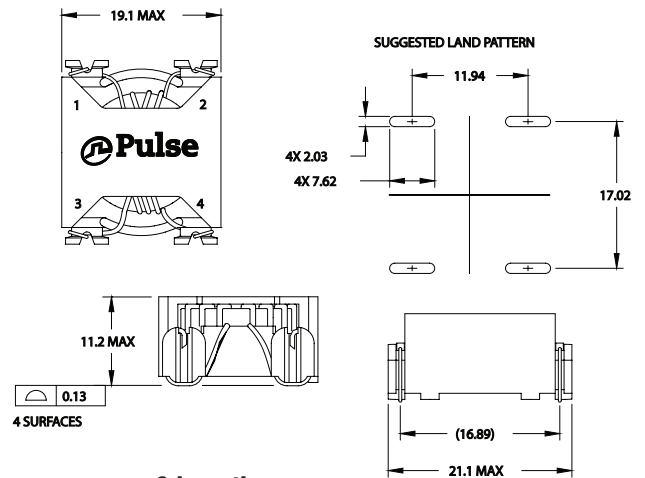
Makeni



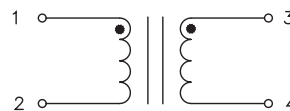
Schematic



1:1 ±2%



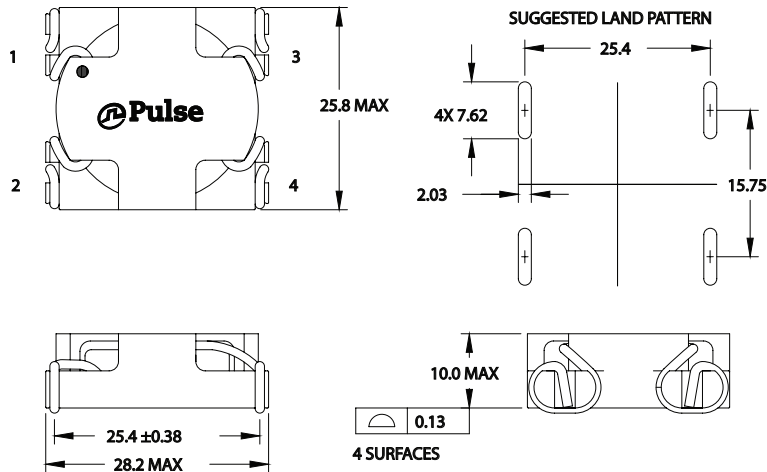
Schematic



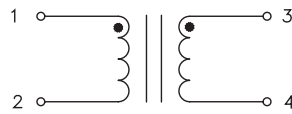
1:1 ±2%

Mechanicals

HCCI-68

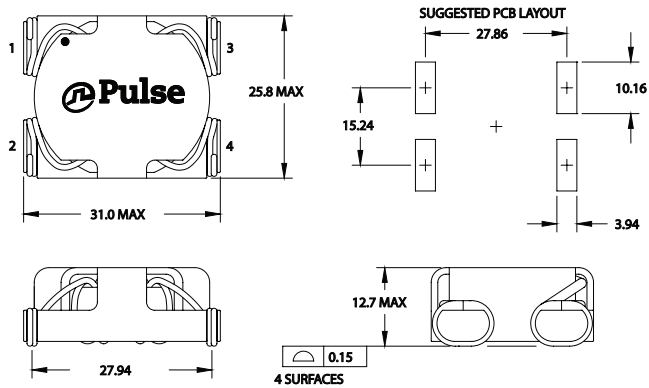


Schematic

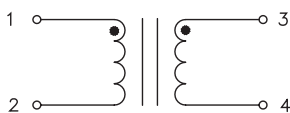


1:1 ±2%

HCCI-80

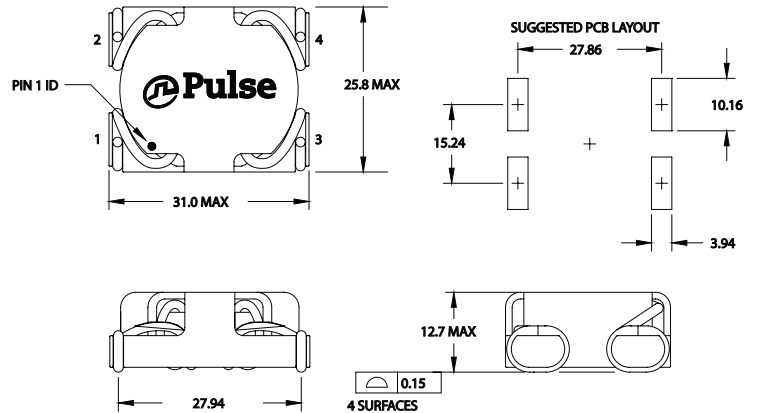


Schematic

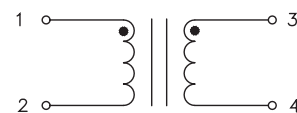


1:1 ±2%

HCCI-80 - PA2757NL



Schematic



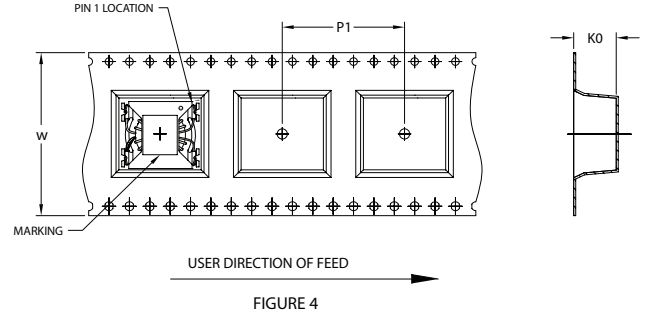
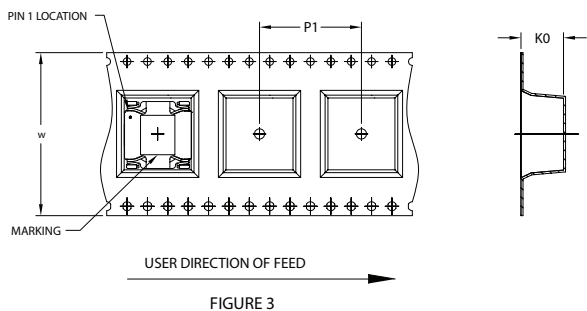
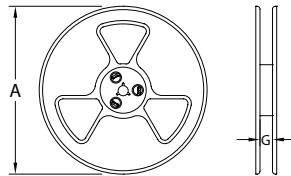
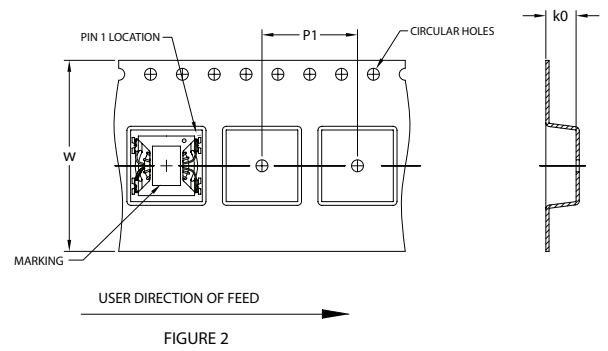
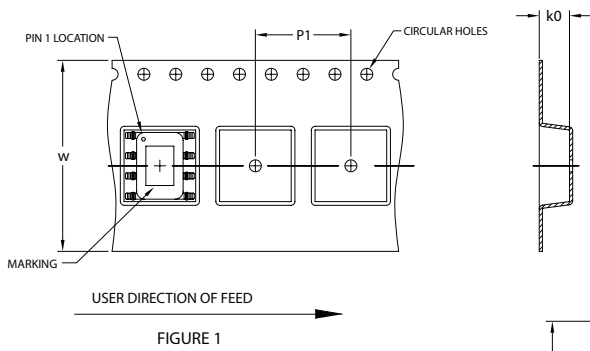
1:1 ±2%

SMT Common Mode Chokes

Shasta and SLIC

TAPE & REEL INFO

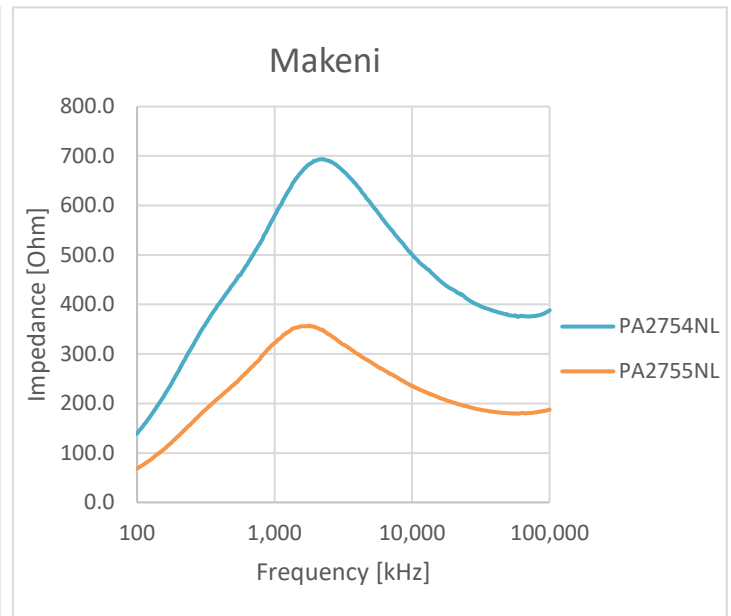
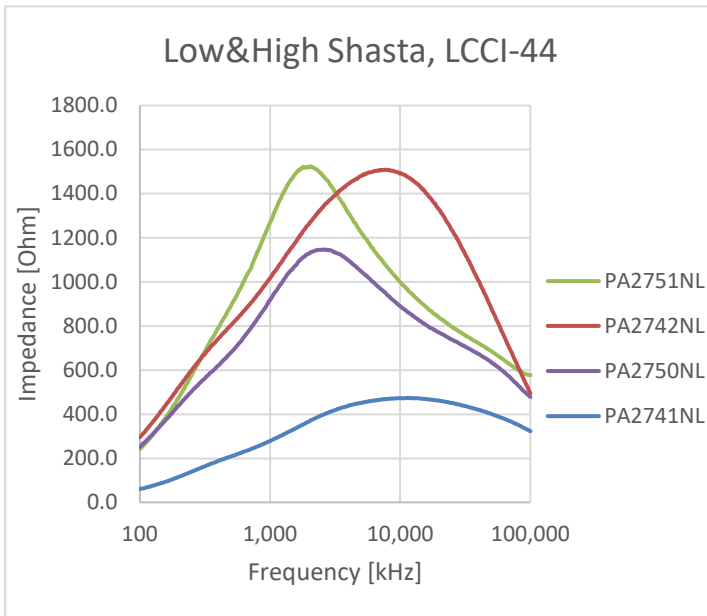
Platform	SURFACE MOUNTING TYPE, REEL/TAPE LIST						Figure
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY	
	A	G	P_1	W	K_0	PCS/REEL	
Low Shasta	330	24.4	12.0	24.0	13.5	1250	1
High Shasta	330	24.4	16.0	24.0	8.13	400	1
Polecat	330	24.4	16.0	24.0	5.6	500	1
Polecat-HP	330	32.4	20.0	32.0	8.35	300	3
LCCI-37 - PA2749NLT	330	24.4	24.0	24.0	9.3	200	2
LCCI-37 - OTHER PARTS	330	24.4	24.0	24.0	9.3	200	1
LCCI-44-LP	330	32.4	24.0	32.0	7.75	200	3
LCCI-44	330	32.4	24.0	32.0	10.3	200	3
LCCI-50 - PE-53910NLT, PE-53912NLT, P0422NLT	330	32.4	24.0	32.0	10.2	200	3
LCCI-50 - OTHER PARTS	330	32.4	24.0	32.0	10.2	200	4
Makeni	330	32.4	24.0	32.0	11.3	150	3
HCCI-68	330	44.4	32.0	44.0	9.9	100	4
HCCI-80 - PA0502NLT, PA2757NLT	330	44.4	40.0	44.0	12.7	75	3
HCCI-80 - OTHER PARTS	330	44.4	40.0	44.0	12.7	75	4



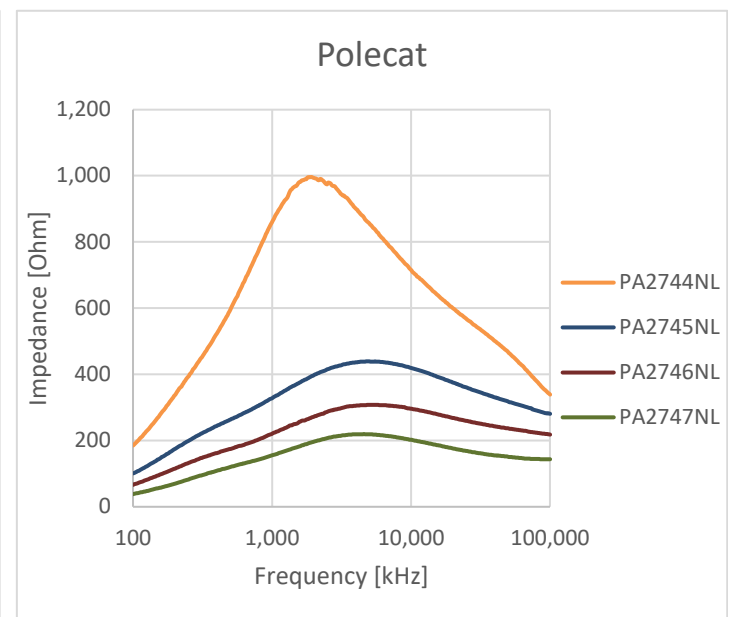
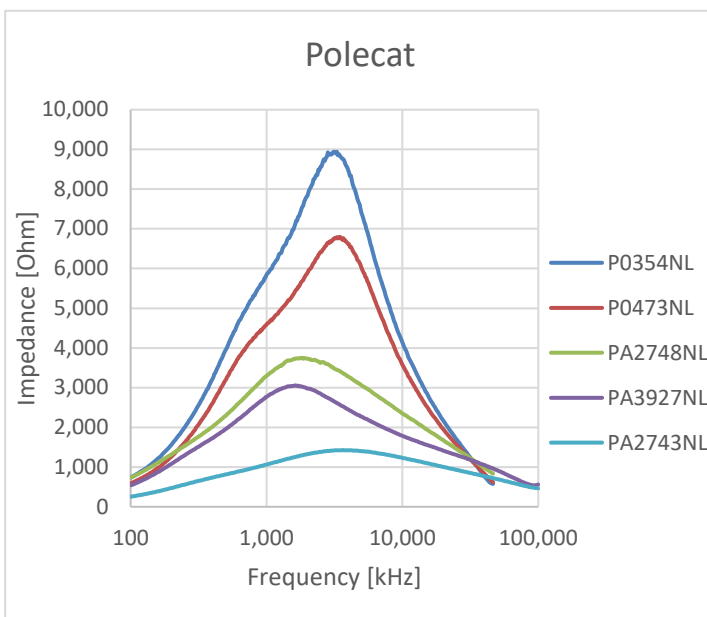
Impedance Plots

Low Shasta, High Shasta, LCCI-44

Makeni

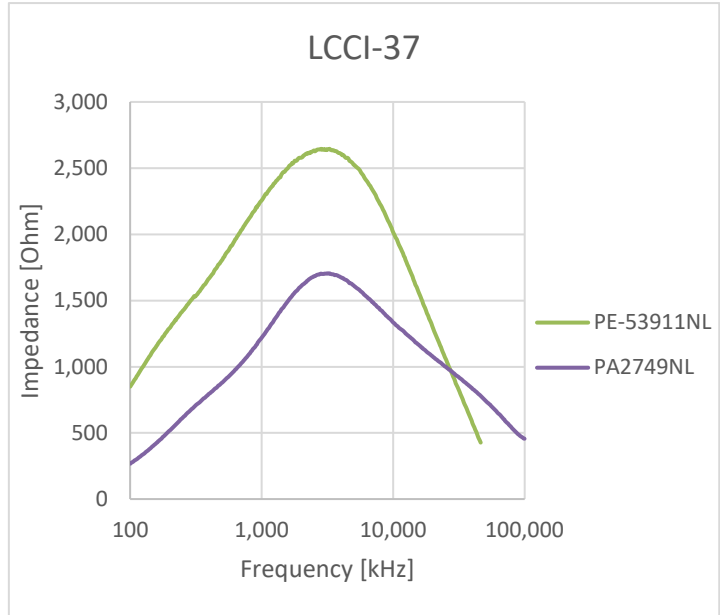
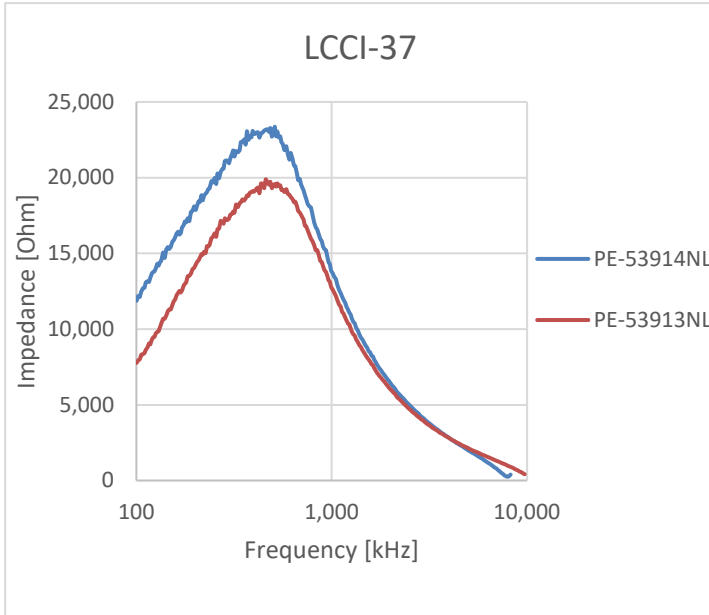


Polecat

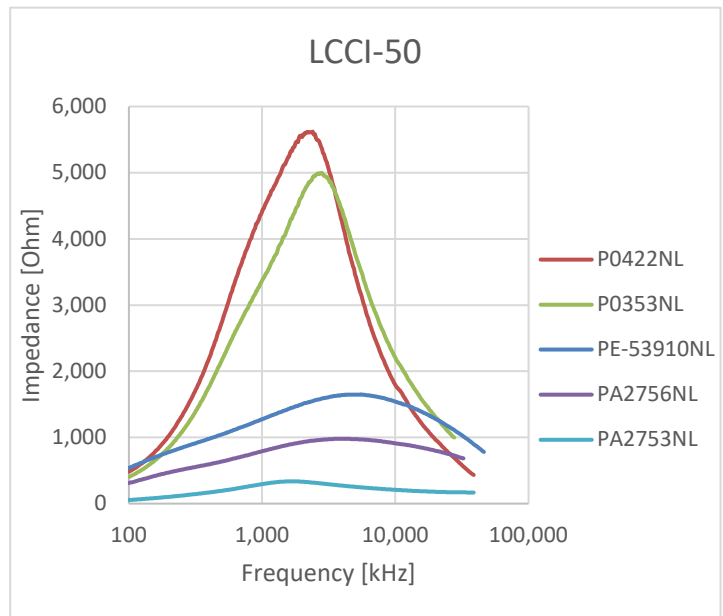
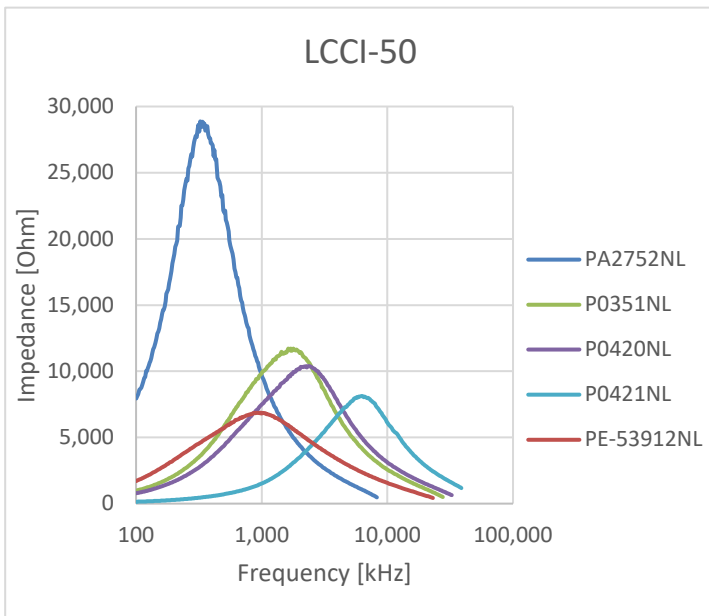


Impedance Plots

LCCI-37



LCCI-50

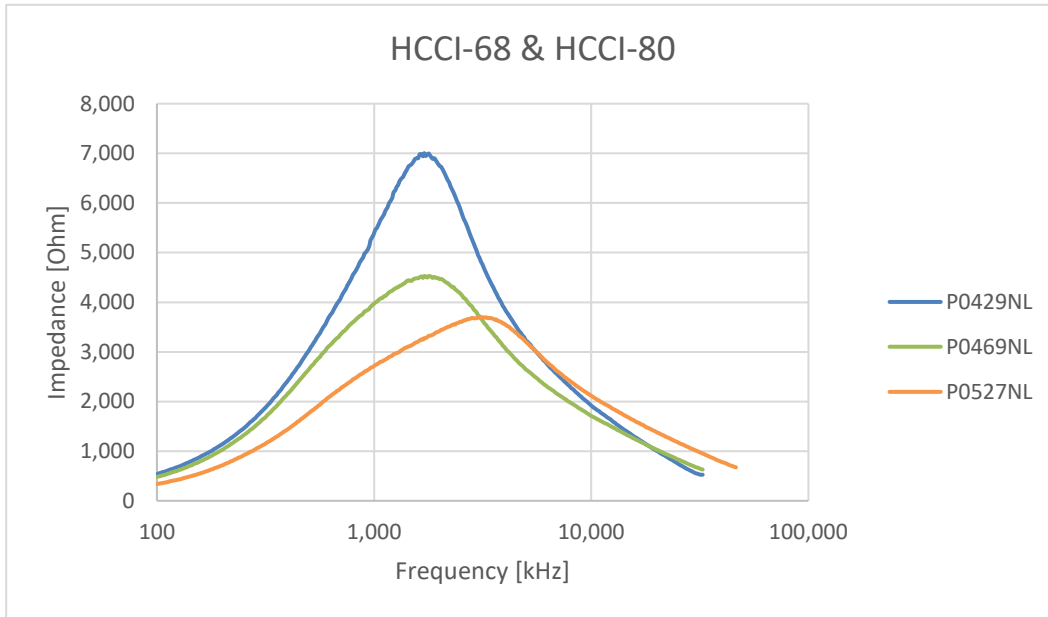


SMT Common Mode Chokes

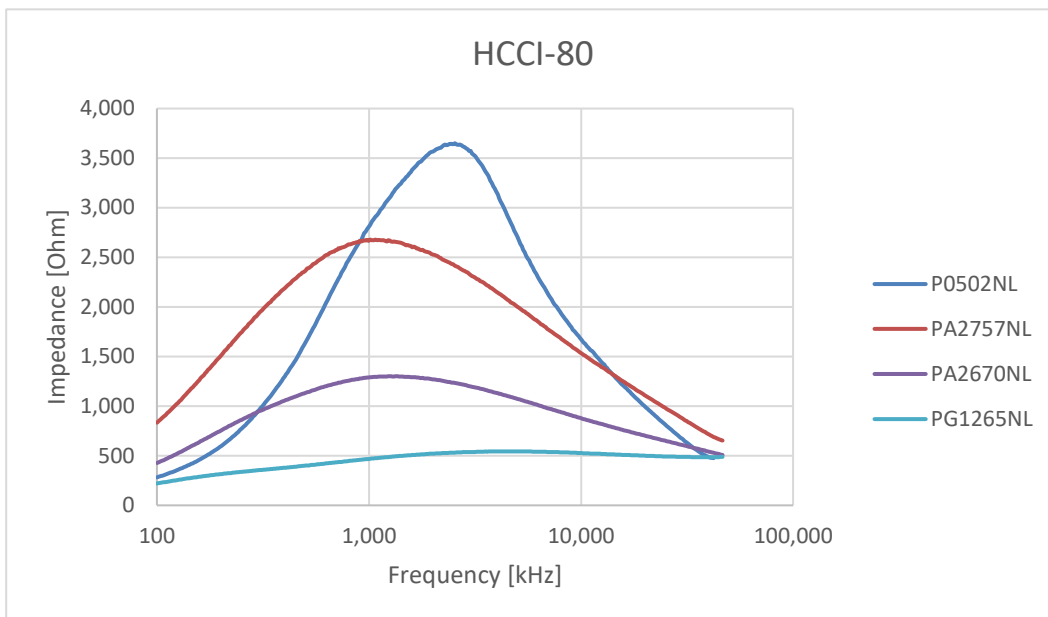
Shasta and SLIC

Impedance Plots

HCCI-68, HCCI-80



HCCI-80



For More Information:

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