

SMT PLANAR POWER INDUCTOR SERIES



NEW!



- ⚙ **Height:** .290" Max
- ⚙ **Footprint:** .78" x .75"
- ⚙ **Current Range:** 9 A to 73 A
- ⚙ **Inductance Range:** .45 μ H to 6.2 μ H
- ⚙ **Maximum Energy Storage:** 2.4 mJ
- ⚙ **Low Power Loss Ratings:** .16 to 2.25 W
- ⚙ **Frequency Range:** 100 kHz to 2 MHz

Electrical Specifications @ 25°C — Operating Temperature -40°C to +100°C

Part Number	Inductance @ Irated (μH ±15%)	Irated ¹ (ADC)	DCR (mΩ)		Inductance @ 0 ADC (μH ±15%)	Saturation Current ²		Heating Current ³ (A)	P _d @ Irated (W)
			TYP	MAX		25°C	100°C		
2-Turn (Low - Loss) Series									
PA1294.450	0.45	73	.38	.48	0.45	95	80	73	2.08
PA1294.650	0.63	54	.38	.48	0.65	63	53	73	1.06
PA1294.910	0.85	39	.38	.48	0.91	46	37	73	0.55
PA1294.112	1.05	30	.38	.48	1.10	35	30	73	0.35
PA1294.132	1.25	25	.38	.48	1.30	29	26	73	0.26
PA1294.152	1.45	21	.38	.48	1.50	24	22	73	0.18
2-Turn Series									
PA1292.450	0.45	52	.78	.98	0.45	95	80	52	2.25
PA1292.650	0.63	52	.78	.98	0.65	63	53	52	2.13
PA1292.910	0.85	39	.78	.98	0.91	46	37	52	1.10
PA1292.112	1.05	30	.78	.98	1.10	35	30	52	0.71
PA1292.132	1.25	25	.78	.98	1.30	29	26	52	0.53
PA1292.152	1.45	21	.78	.98	1.50	24	22	52	0.37
3-Turn Series									
PA1393.102	0.95	42	1.15	1.43	1.0	68	54	42	2.25
PA1393.152	1.40	36	1.15	1.43	1.5	43	35	42	1.53
PA1393.202	1.90	25	1.15	1.43	2.0	29	25	42	0.78
PA1393.252	2.40	20	1.15	1.43	2.5	23	21	42	0.50
PA1393.302	2.80	15	1.15	1.43	3.0	18	16	42	0.28
PA1393.352	3.40	12	1.15	1.43	3.5	15	13	42	0.18
4-Turn Series									
PA1494.162	1.60	37	1.44	1.80	1.6	55	43	37	2.14
PA1494.242	2.40	30	1.44	1.80	2.4	35	27	37	1.03
PA1494.362	3.30	17	1.44	1.80	3.6	20	18	37	0.53
PA1494.442	4.00	14	1.44	1.80	4.4	16	15	37	0.37
PA1494.532	4.90	11	1.44	1.80	5.3	13	12	37	0.24
PA1494.622	5.80	9	1.44	1.80	6.2	11	10	37	0.16

NOTES:

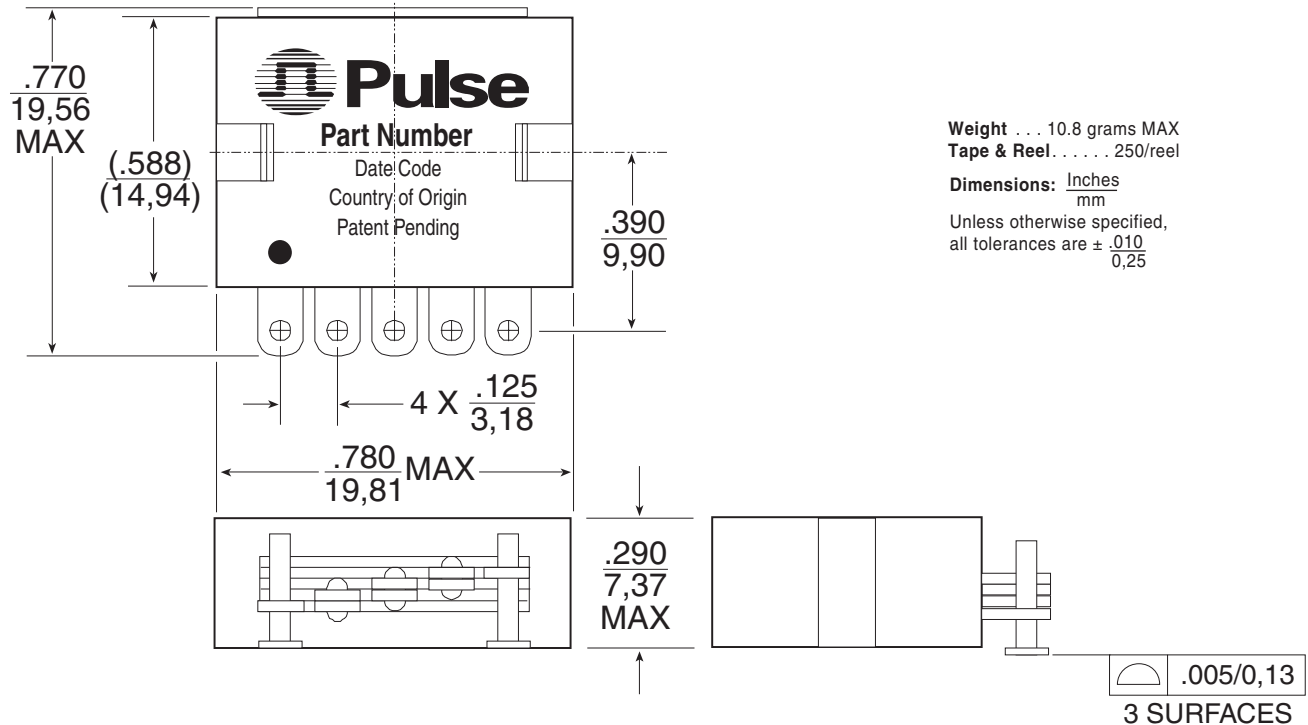
- The rated current as listed is either 85% of the saturation current or the heating current, depending on which value is lower.
- The saturation current is the current which causes the inductance to drop by 15% at the stated ambient temperatures (25°C and 100°C). This current is determined by lacing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
- The heating current is the dc current which causes the temperature of the part to increase by approximately 45°C. This current is determined by mounting the component on a PCB with .25" wide, 2 oz. equivalent copper traces, and applying the current to the device for 30 minutes with no forced air cooling.
- In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may necessitate derating the current in order to limit the temperature rise of the component. In order to determine the approximate total losses (or temperature rise) for a given application, the total copper and core losses should be taken into account. For approximate value of core losses, in a given application, use the core loss graph on page 4.
- Pulse recommends the following solderability test: Dip pin tip in flux (mildly active), dip in solder pot (63Sn/37Pb solder) at 245°C for 5 seconds.

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Mechanical

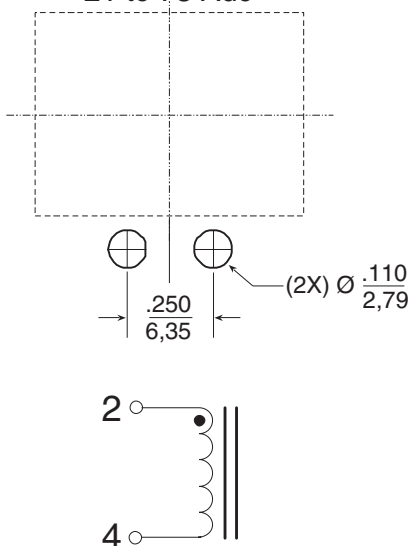
PA1294/PA1292/PA1393/PA1494



Suggested Pad Layouts and Schematics

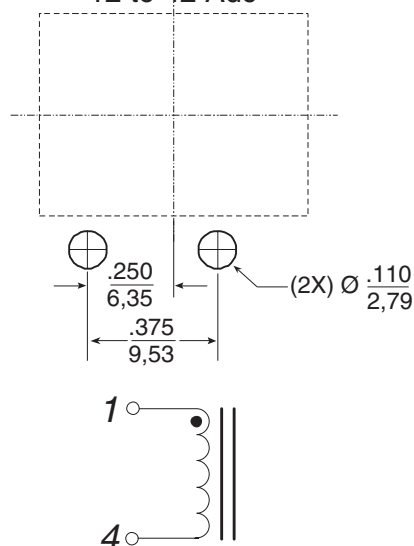
PA1292 & PA1294

.45 to 1.50 μH
 21 to 73 Adc



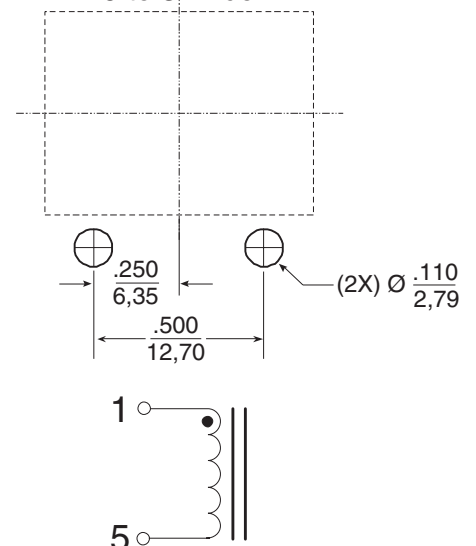
PA1393

1.00 to 3.50 μH
 12 to 42 Adc



PA1494

1.60 to 6.20 μH
 9 to 37 Adc

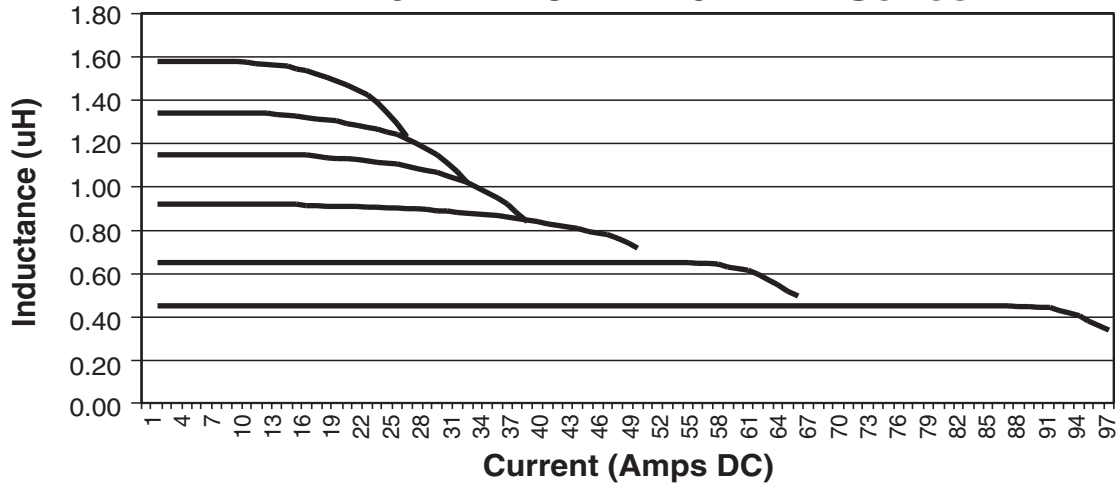


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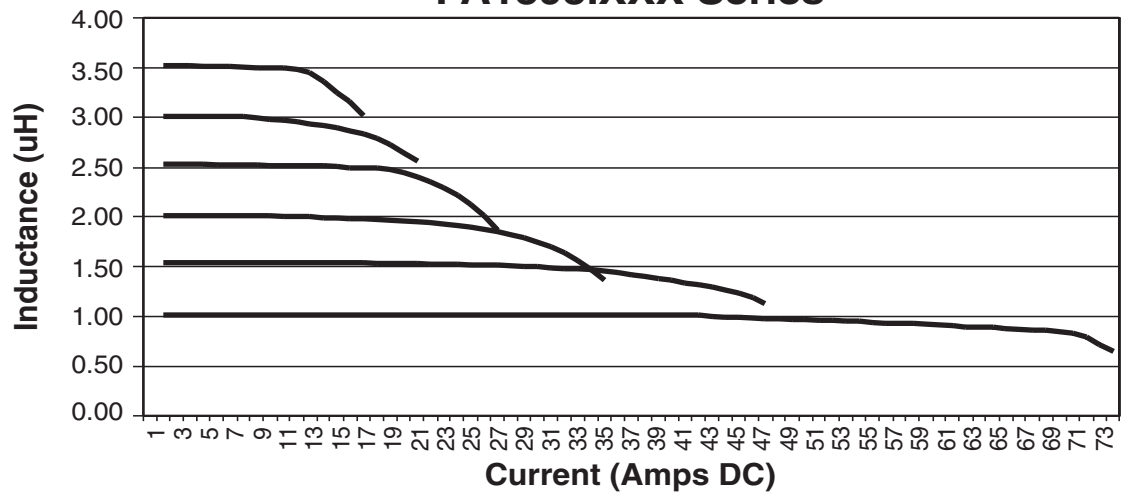


Inductance vs. Current Characteristics (25°C)

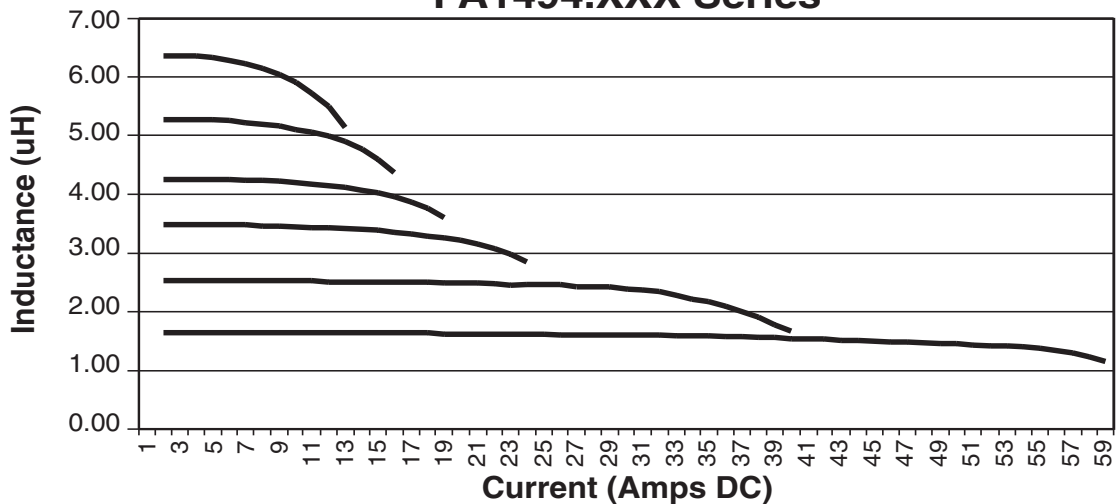
PA1292.XXX & PA1294.XXX Series



PA1393.XXX Series



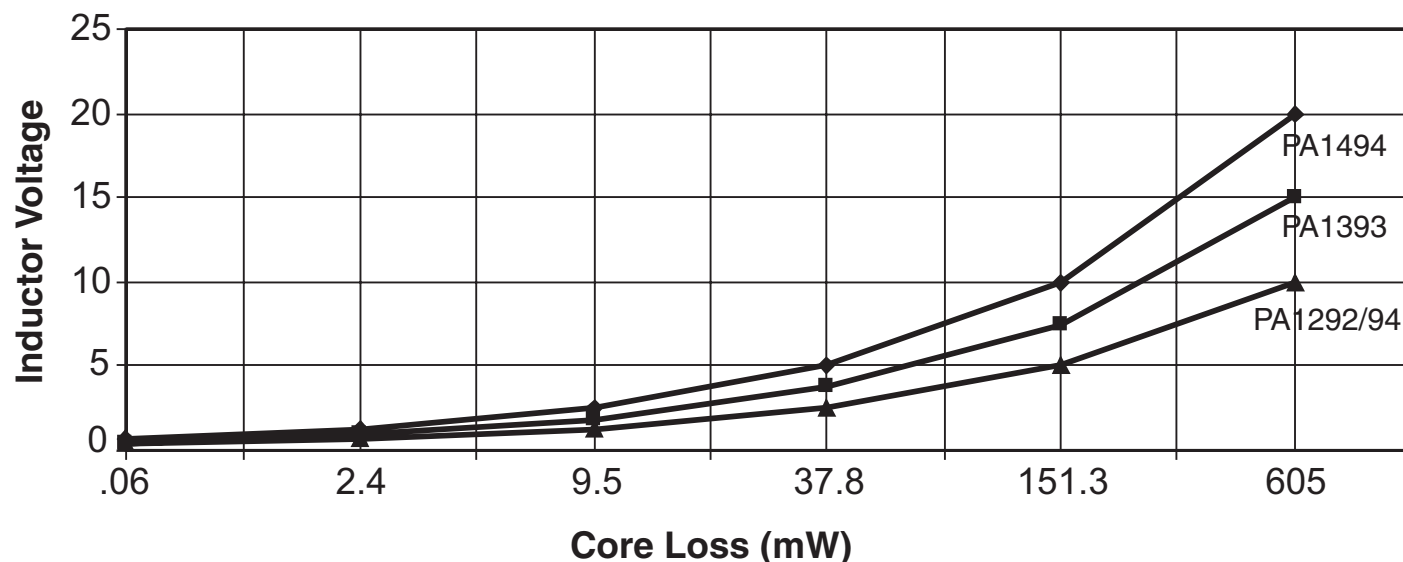
PA1494.XXX Series



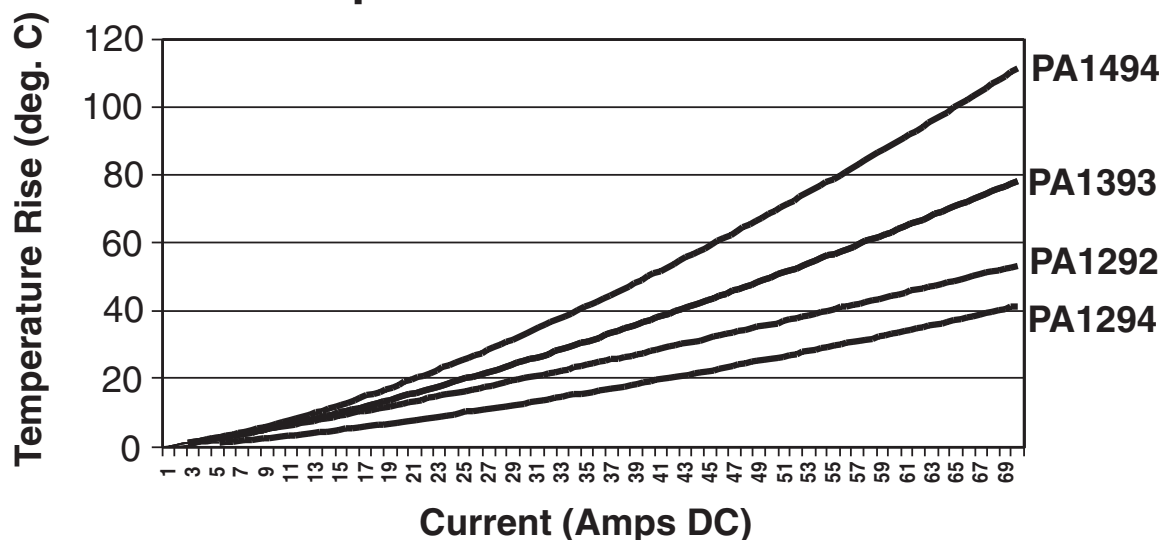
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Typical Core Loss



Temperature Rise vs. Current



For More Information :

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