






SMT POWER INDUCTORS

Power Beads - PA0511HL



-  **Current Rating:** Over 70Apk
-  **Inductance Range:** 85nH to 220nH
-  **Height:** 4.96 mm Max
-  **Footprint:** 10.2mm x 7.0 mm
-  **Halogen Free:** < 900ppm Cl, < 900ppm Br

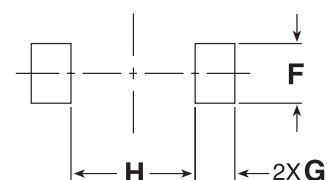
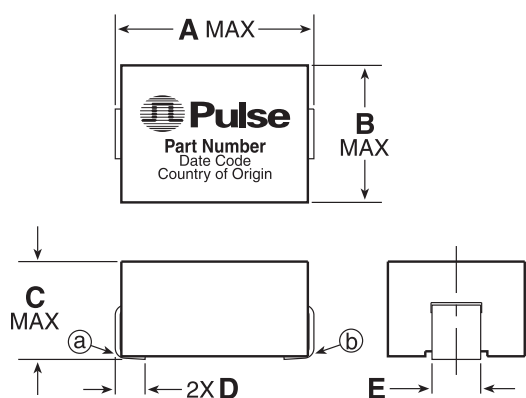
Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C⁷

Part Number	Inductance @0A _{DC} (nH ±20%)	Inductance @I _{rated} (nH TYP)	I _{rated} ¹ (A _{DC})	DCR ² (mΩ)	Saturation Current ³ (TYP)		Heating ⁴ Current (A TYP)
					25°C	100°C	
PA0511NL and PA1211NL - 10.2mm x 7.0mm x 4.96mm Max							
PA0511.850HLT	85	85	31	0.39 ±7.7%	70+	70	31
PA0511.900HLT	100	100	31		70	65	
PA0511.101HLT	120	120	31		52	42	
PA0511.151HLT	155	150	31		40	36	
PA0511.221HLT	220	176	25		33	25	

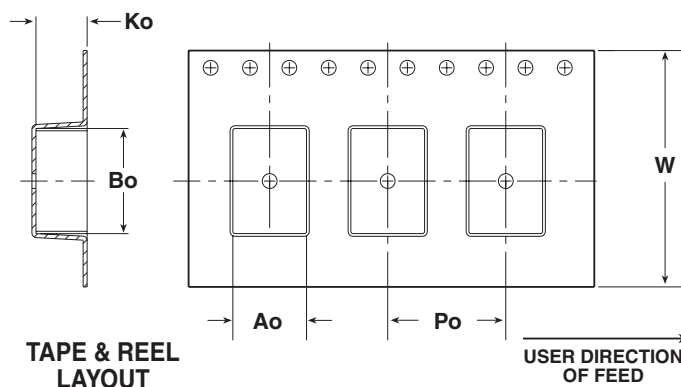
NOTES:

- The rated current as listed is either the saturation current or the heating current depending on which value is lower.
- The nominal DCR tolerance is by design. The nominal DCR is measured from point a to point b, as shown below on the mechanical drawing.
- The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C and 100°C). This current is determined by placing 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 part temperature to increase by approximately 40°C. This current is determined by soldering the component on a typical application PCB, and then applying the current to the device for 30 minutes without any 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. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise curves can be used.
- Pulse complies to industry standard tape and reel specification EIA481.
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

Mechanical



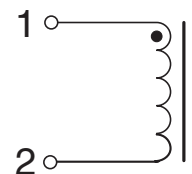
SUGGESTED PAD LAYOUT



TAPE & REEL LAYOUT

Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{0.10}{0.25}$

Schematic



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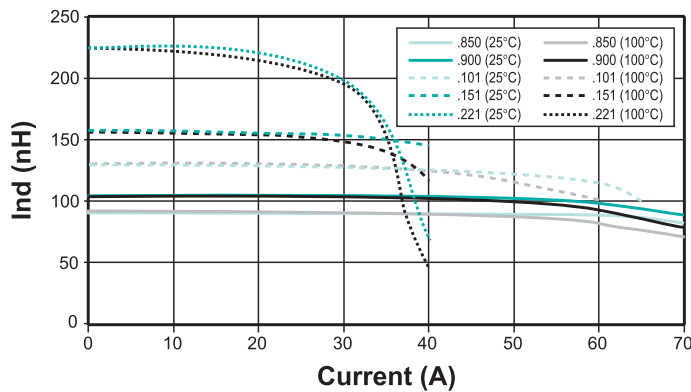


Dimensions (inches/mm)

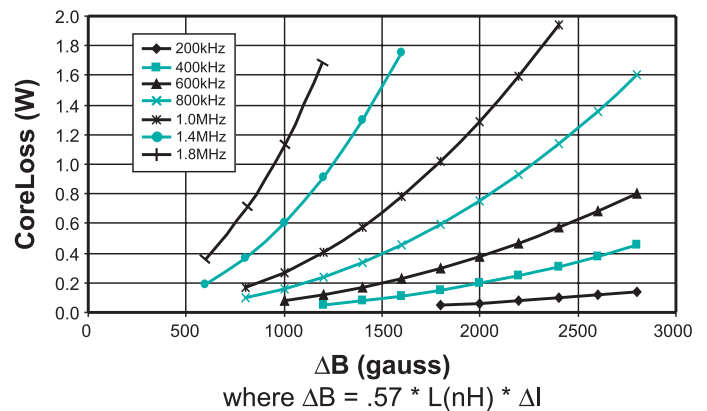
Part Number	Mechanical Dimensions							T&R Dimensions						Parts/Reel	Weight (grams)
	A (MAX)	B (MAX)	C (MAX)	D (NOM)	E (NOM)	F (NOM)	G (NOM)	H (NOM)	Ao	Bo	Ko	Po	W		
PA0511/PA1211	.400 10,20	.276 7,00	.195 4,96	.060 1,52	.098 2,49	.120 3,05	.080 2,03	.250 6,35	.295 7,49	.420 10,67	.205 5,21	.472 12,00	.945 24,00	1000	1.35

PA0511HL

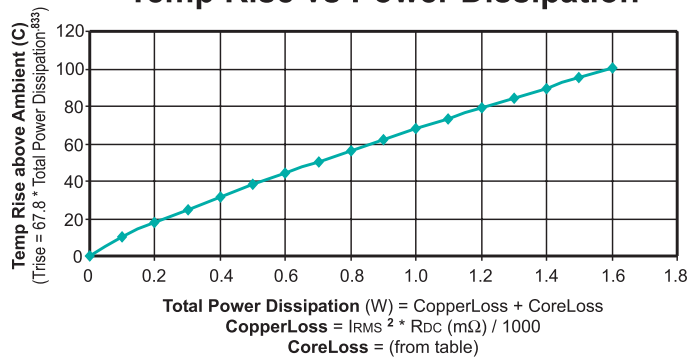
Inductance vs Current



CoreLoss vs Flux Density



Temp Rise vs Power Dissipation



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