

SMT Power Inductors

Power Beads - PG1712.XXXHLT Series



- Ⓢ Current Rating: Over 100Apk
- Ⓢ Inductance Range: 100nH to 220nH
- Ⓢ Height: 9.3mm Max
- Ⓢ Footprint: 9.6mm x 6.4mm Max

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

Part Number	Inductance ¹ @ 0A _{DC} (nH +/- 10%)	Inductance ² @ I _{rated} (nH TYP)	I _{rated} ³ (ADC)	DCR ⁴ (m.Ω nominal)	Saturation Current ⁵ (A TYP)		Heating Current ⁶ (A TYP)	Width (W)
					25°C	100°C		
PG1712.101HLT	100	100	65	0.17+/-5%	112*	98	65	6.5
PG1712.121HLT	115	115	65		97	80		
PG1712.151HLT	150	150	65		75	63		6.4
PG1712.331HLT	220	175	50		44	39		

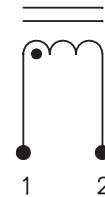
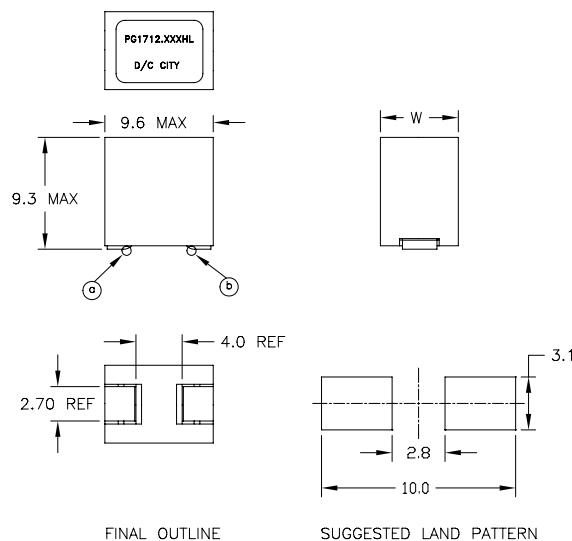
NOTES:

- Inductance measured at 100kHz, 100mVrms.
- Inductance at I_{rated} is the value of the inductance at 25°C at the listed rated current.
- The rated current as listed is either the saturation current (25°C or 100°C) or the heating current depending on which value is lower.
- The nominal DCR is measured from point ⓐ to point ⓑ, 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, 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 when used in a typical application.
- 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.
- Parts with the HLT suffix are sold in tape and reel packaging. Pulse complies to industry standard tape and reel specification EIA-481. The tape and reel for this product has a width (W=24mm), pitch (Po=16mm) and depth (Ko=10.3mm). Samples of these parts can be ordered by removing the HLT suffix and replacing with HL.
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

Mechanical

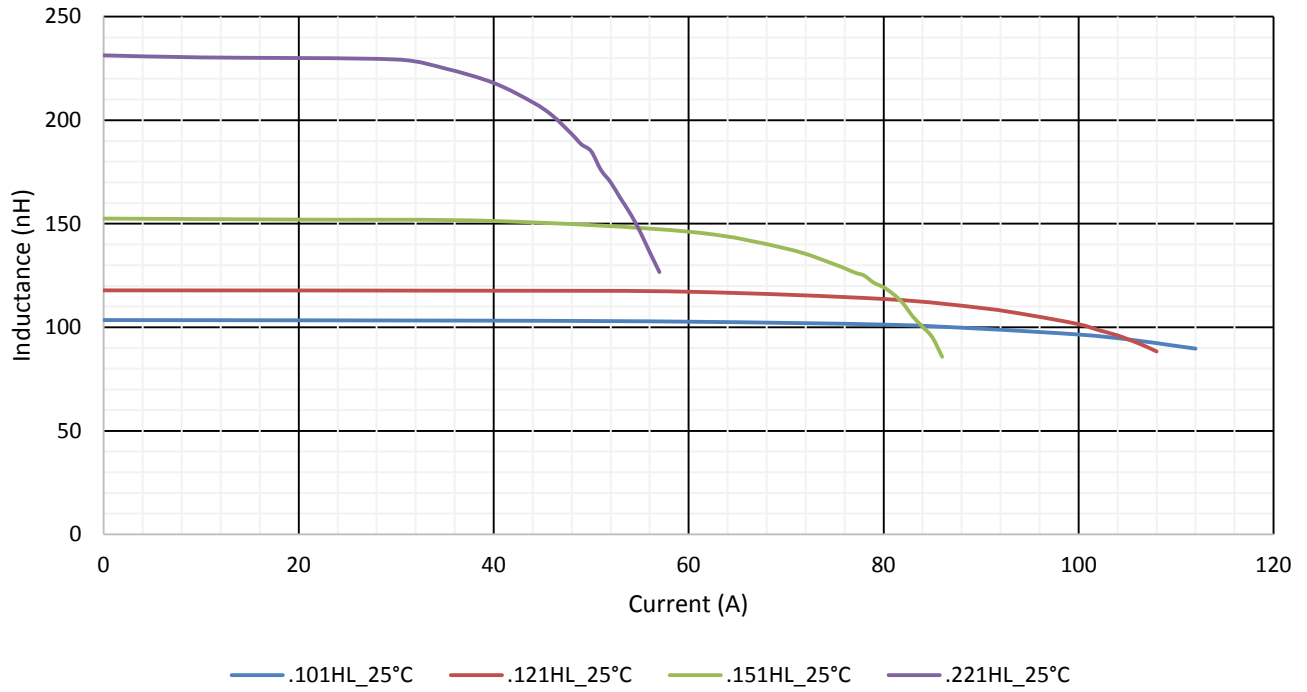
Schematic

PG1712.XXXHLT

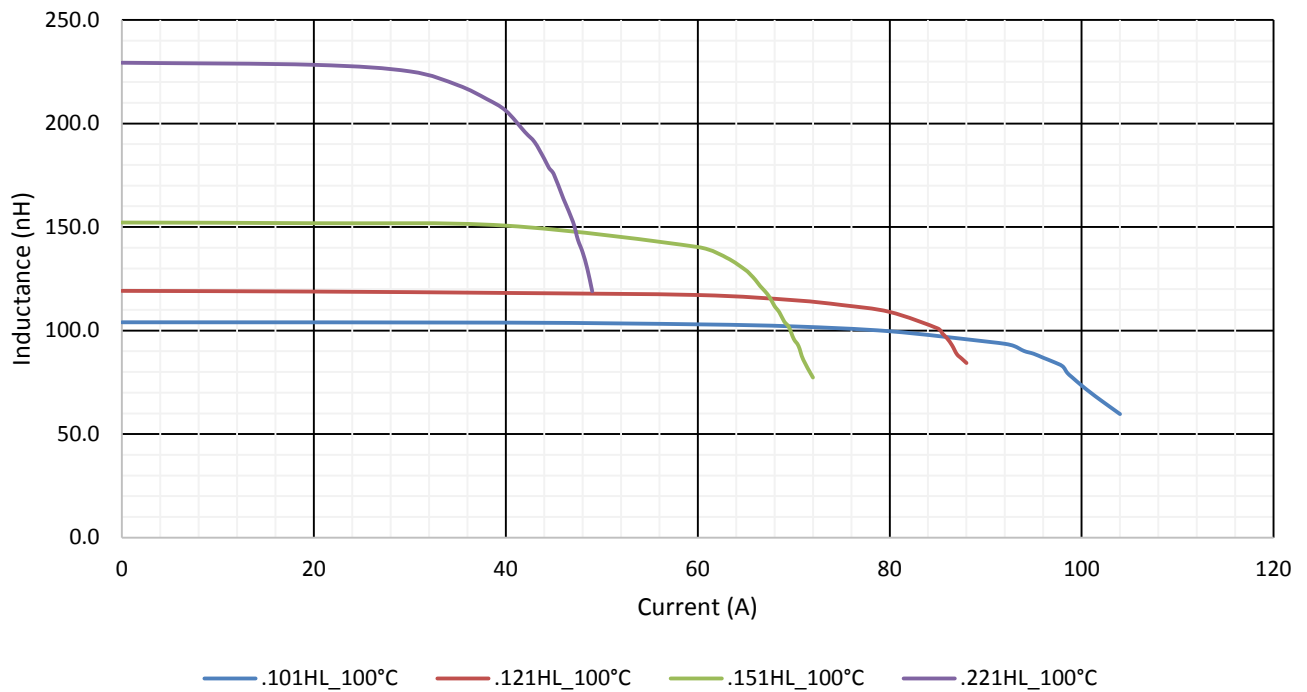


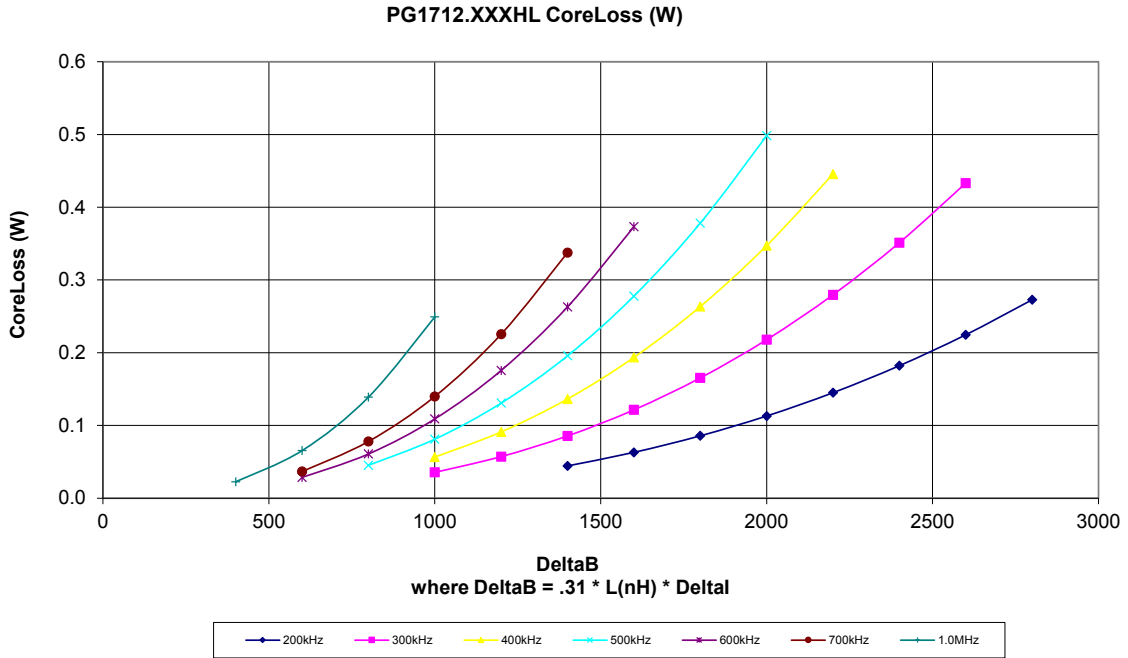
Weight 2.60/ grams
 Tape & Reel 300/ reel
 Dimensions: mm
 Unless otherwise specified, all tolerance are ±0.25.

PG1712.XXXHL, LvsI, 25°C

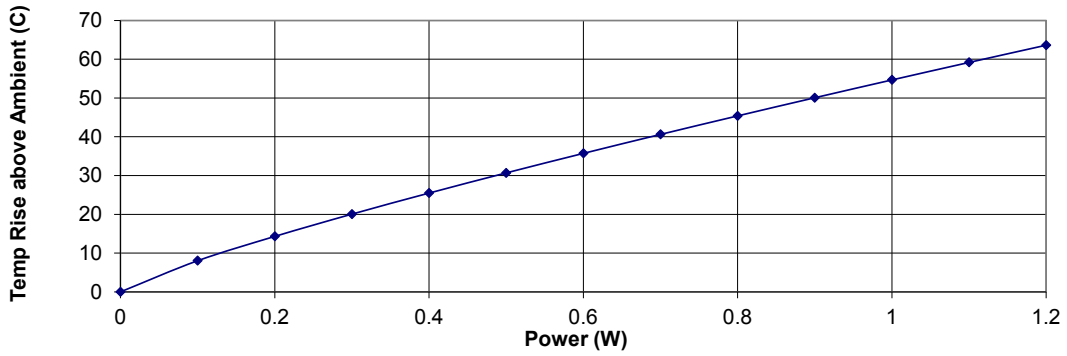


PG1712.XXXHL, LvsI, 100°C





PG1712.XXXHL Temp Rise vs Power Dissipation



Total Power Dissipation (W) = CopperLoss + CoreLoss
 CopperLoss = $I_{rms}^2 * R_{dc}(mOhms) / 1000...$