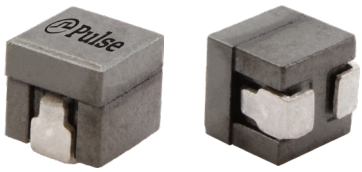
SMT Power Inductors

Power Beads - PA5189.XXXHLT Series



- ***Current Rating:*** *Over 20.5Apk*
- ***Inductance Range:*** *100nH*
- ***Height:*** *4.1mm Max*
- ***Footprint:*** *4.1mm x 4.1mm Max*

Electrical Specifications @ 25°C — Operating Temperature - 40°C to +130°C [7]

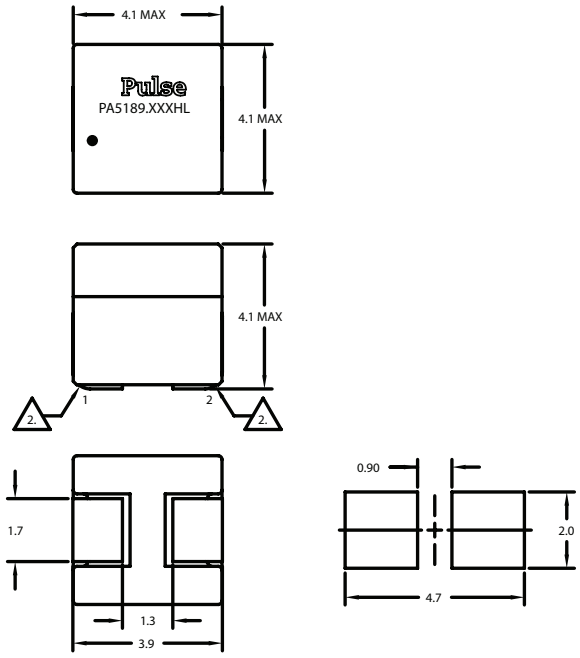
Part Number	Inductance[1] @ 0ADC (nH +/- 15%)	Inductance[2] @Irated (nH TYP)	Irated[3] (ADC)	DCR[4] (mΩ nominal)	Saturation Current[5] (A TYP)		Heating Current[6] (A TYP)
					25°C	100°C	
PA5189.101HLT	100	70	20.5	0.39+/- 10%	20.5	17	39

NOTES:

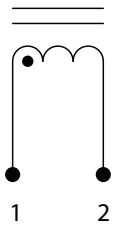
1. Inductance measured at 100kHz, 100mVrms.
2. Inductance at Irated is the value of the inductance at 25°C at the listed rated current.
3. The rated current as listed is either the saturation current (25°C or 100°C) or the heating current depending on which value is lower.
4. The nominal DCR is measured at point 2., as shown below on the mechanical drawing.
5. 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.
6. The heating current is the DC current which causes the part temperature to increase by approximately 40°C when used in a typical application.
7. In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may neccessitate 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.
8. 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=16mm), pitch (Po=8mm) and depth (Ko=4.65mm). Samples of these parts can be ordered by removing the HLT suffix and replacing with HL.
9. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

Mechanical

PA5189.XXXHLT



Schematic



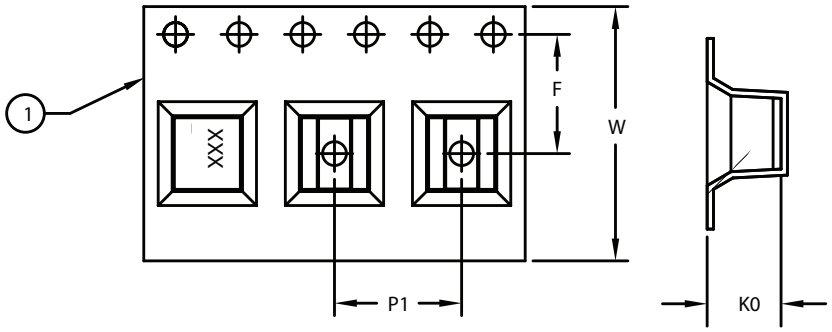
Weight: 2.74grms

Tape &Reel: ..... 1500/ Reel

Dimensions: mm

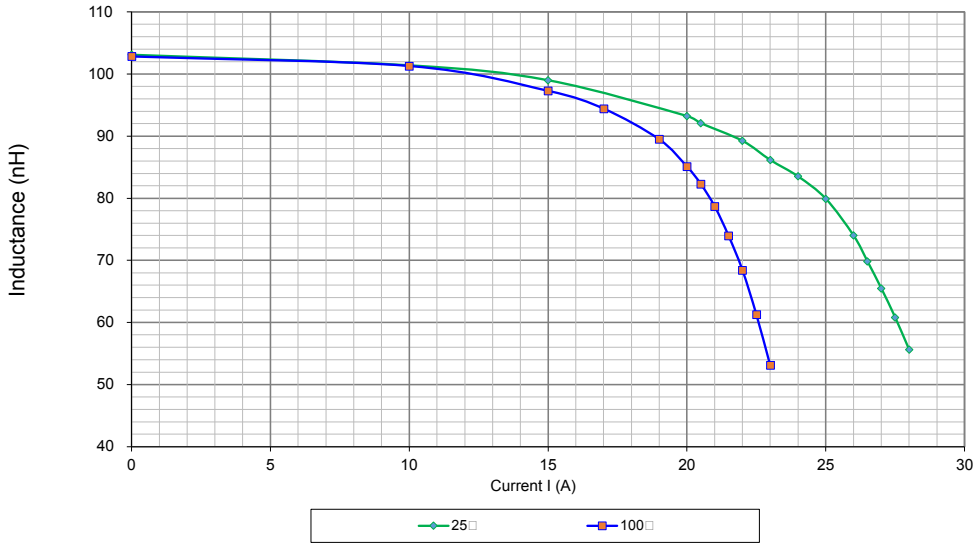
Unless otherwise specified ,
all tolerances are ± 0.25

TAPE & REEL INFO

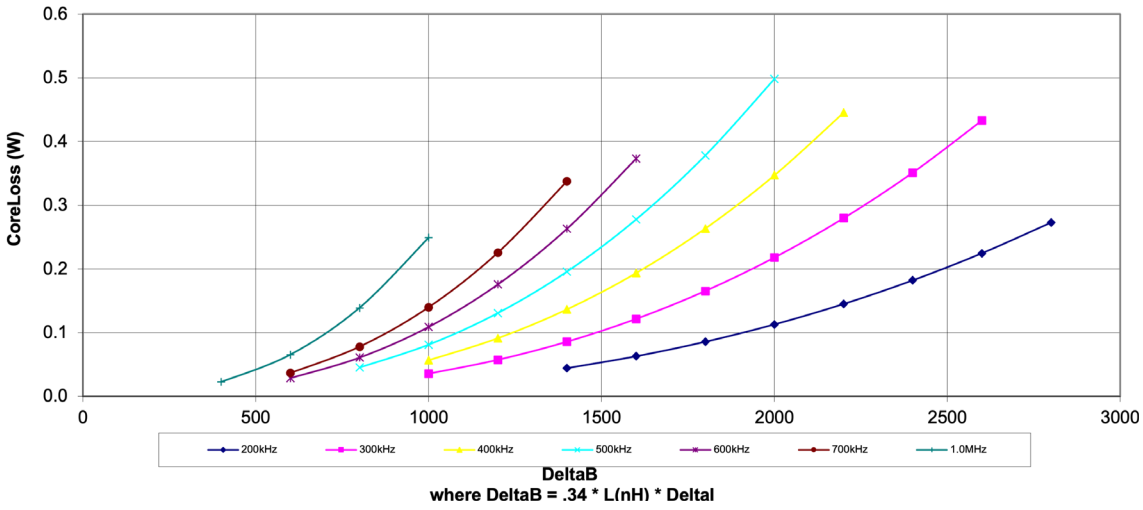


SURFACE MOUNTING TYPE, REEL/TAPE LIST					
TYPE	REEL SIZE (mm)			TAPE SIZE (mm)	QTY
	W ± 0.30	K0 ± 0.1	P1 ± 0.1	F ± 0.1	PCS/REEL
PA5189.XXXHLT	16.0	4.65	8.0	7.5	1500

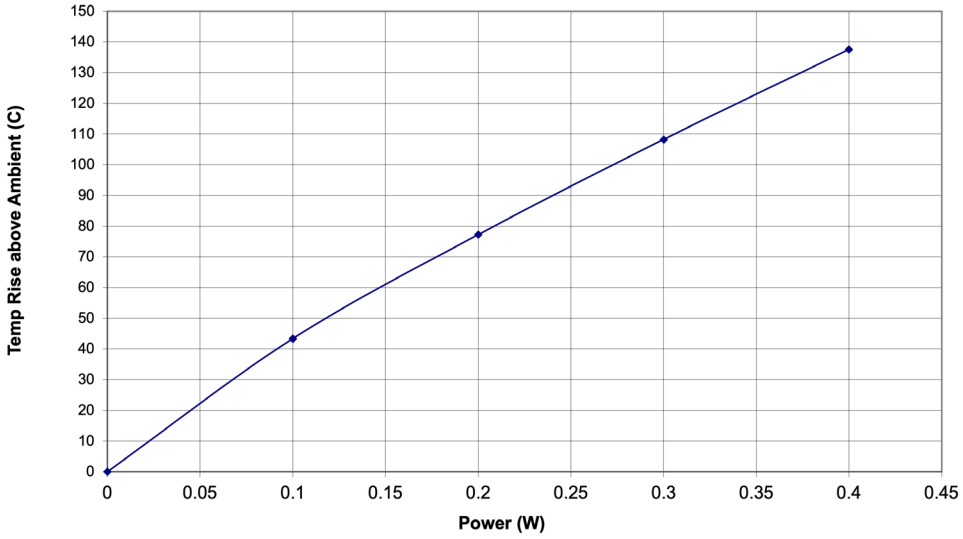
PA5189.101HLT, L vs I, Curve



PA5189.XXXHLT CoreLoss (W)



PA5189.XXXHLT Temp Rise vs Power Dissipation



Total Power Dissipation (W) = CopperLoss + CoreLoss
CopperLoss = Irms^2 * Rdc(mOhms) / 1000
CoreLoss = (from table)

For More Information:

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