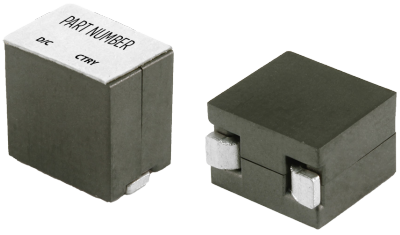
SMT Power Inductors

Power Beads - PA4390.XXXHLT Series



- ***Current Rating:*** *Over 100Apk*
- ***Inductance Range:*** *100nH to 330nH*
- ***Height:*** *10.0mm Max*
- ***Footprint:*** *10.0mm x 7.0mm Max*

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

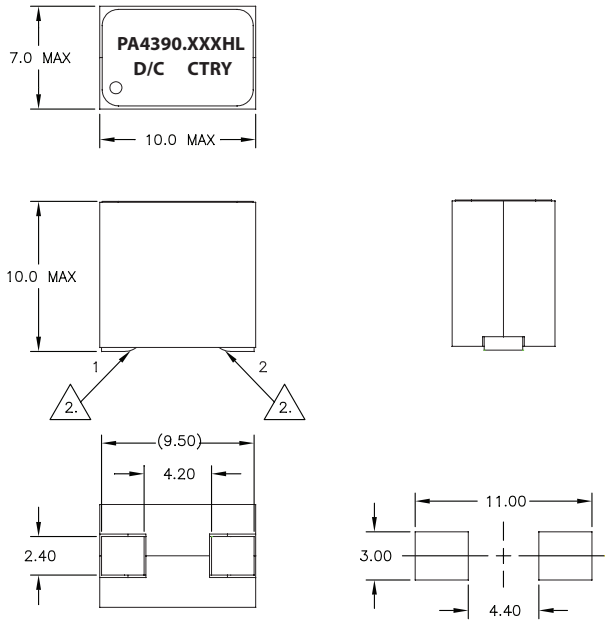
Part Number	Inductance[1] @ 0ADC (nH +/- 15%)	Inductance[2] @Irated (nH TYP)	Irated[3] (ADC)	DCR[4] (mΩ nominal)	Saturation Current[5] (A TYP)			Heating Current[6] (A TYP)
					25°C	100°C	125°C	
PA4390.101HLT	100	100	68	0.185+/-10%	113	86	81	68
PA4390.121HLT	120	120	68		94	81	78	
PA4390.151HLT	150	150	68		80	75	73	
PA4390.331HLT	330	310	33		43	33	31	

NOTES:

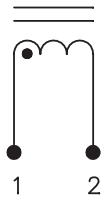
1. Inductance measured at 100kHz, 100mVrms.
2. Inductance at Irated is the value of the inductance at 25°C at the listed rated current.
3. The rated current as listed is either the saturation current (25°C or 100°C) or the heating current depending on which value is lower.
4. The nominal DCR is measured 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=24mm), pitch (Po=16mm) and depth (Ko=10.5mm). 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

PA4390.XXXHLT



Schematic

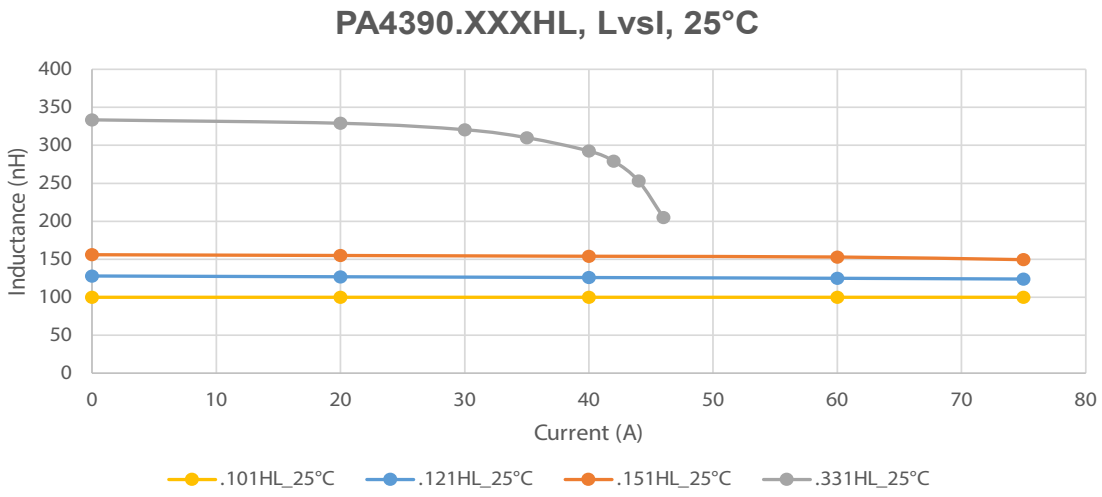


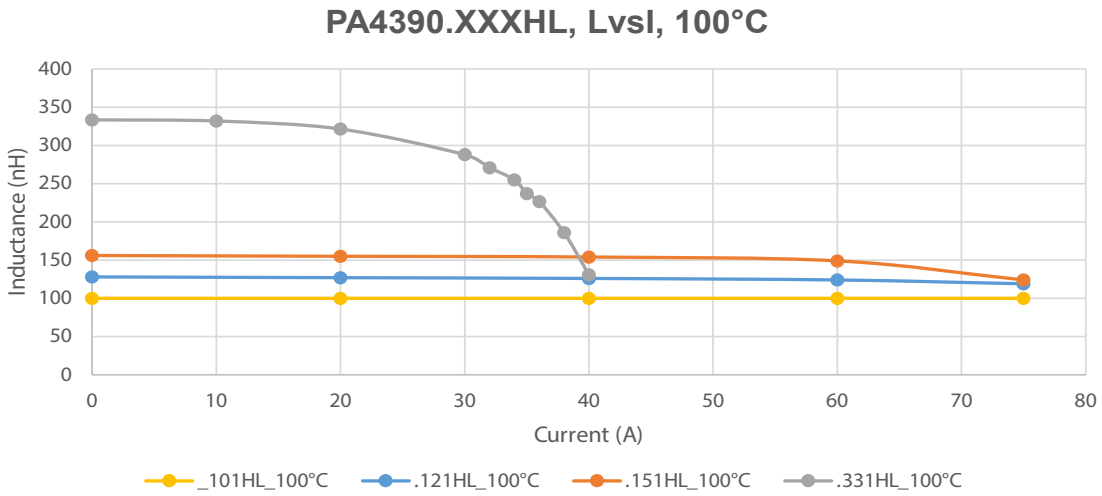
Weight: 2.74grms

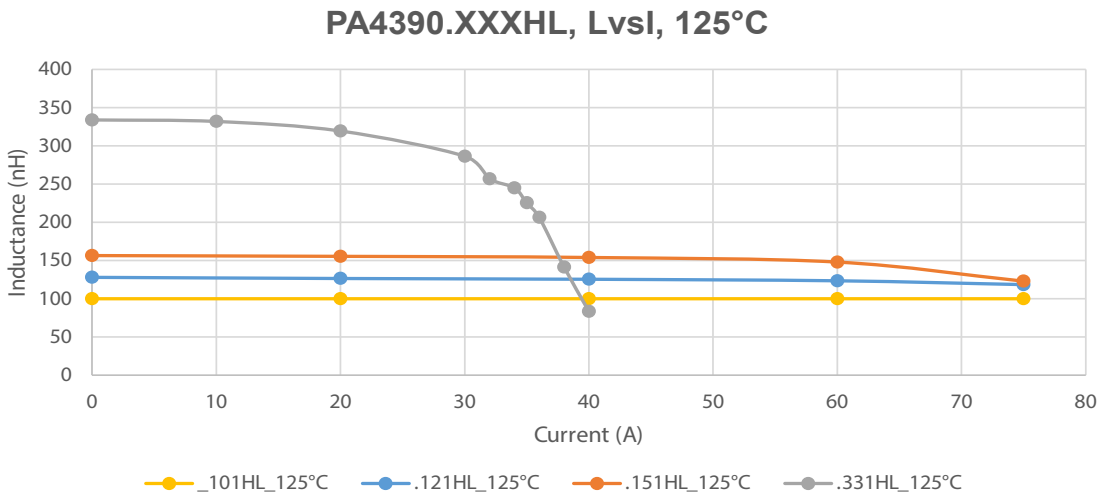
Tape &Reel: ..... 300/ Reel

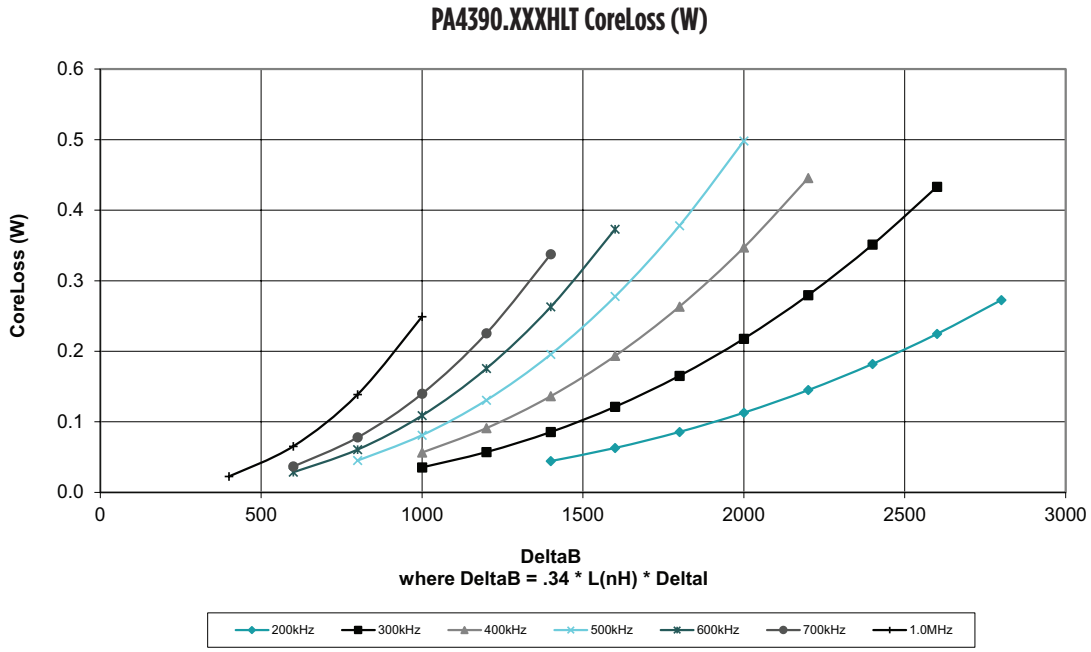
Dimensions: mm

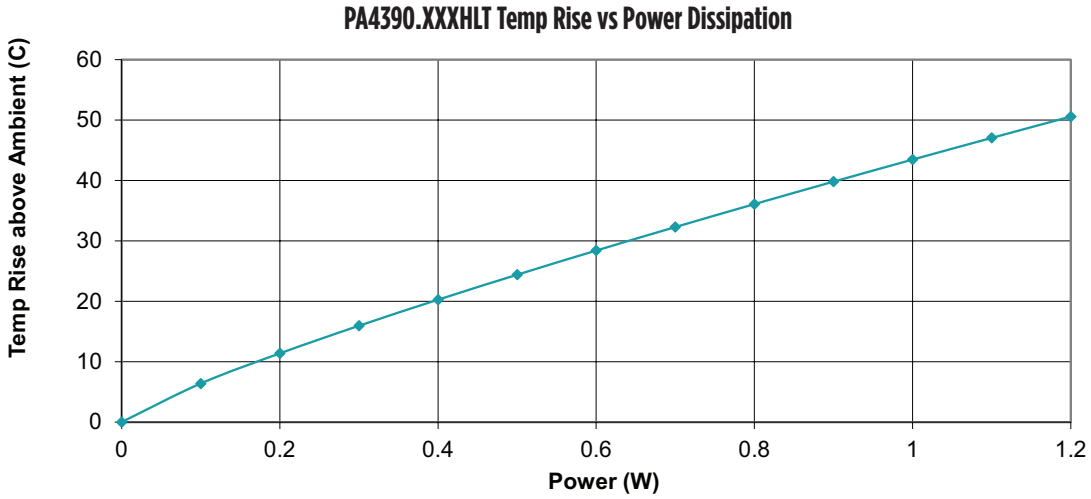
Unless otherwise specified , all tolerances are ± 0.25


PA4390.XXXHL, Lvsl, 25°C
Inductance (nH)
400
350
300
250
200
150
100
50
0
0
10
20
30
40
50
60
70
80
Current (A)
.101HL_25°C
.121HL_25°C
.151HL_25°C
.331HL_25°C


PA4390.XXXHL, Lvsl, 100°C
Inductance (nH)
400
350
300
250
200
150
100
50
0
0
10
20
30
40
50
60
70
80
Current (A)
_101HL_100°C
.121HL_100°C
.151HL_100°C
.331HL_100°C


PA4390.XXXHL, Lvsl, 125°C
Inductance (nH)
400
350
300
250
200
150
100
50
0
0
10
20
30
40
50
60
70
80
Current (A)
_101HL_125°C
.121HL_125°C
.151HL_125°C
.331HL_125°C





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

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