

Extreme Low Profile Power Inductors



AXLPI-1105 Series

Request Samples



Check Inventory



1.1 x 0.6 x 0.5 mm
RoHS/RoHS II Compliant
 MSL Level = 1

Features

- Semi-shielded magnetics, low radiation
- High Power Density
- Extreme Low Profile of 0.5mm Max
- Very small package for medium current applications.
- High Inductance /mm³
- High self-resonant Frequency

Applications

- Smartphones
- Wearable exercise monitors
- Textile Applications
- Diagnostics patches
- Hearing Aids
- Glasses, Cameras
- Highly dense power circuitry

Electrical Specifications

Part Number	Inductance	DCR	SRF	Rated DC Current Max.	
	(μ H)	(Ω) Max	(MHz) Typ	Irms (mA)	Isat (mA)
AXLPI-1105-2R2M	2.2	2.5	150	300	190
AXLPI-1105-4R7M	4.7	3.5	70	220	150

Isat: Based on Inductance change ($\Delta L/L_0 \leq 30\%$)

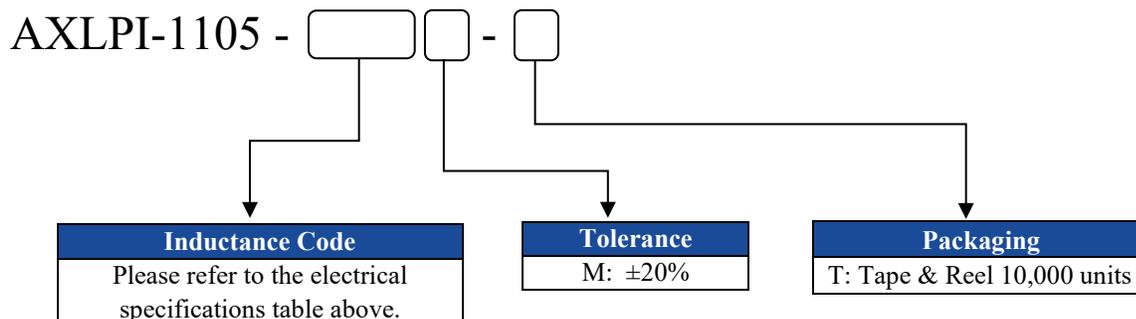
Irms : Based on Temperature change ($T = \Delta 40^\circ\text{C}$)

Test Freq.: 1MHz, 0.1V

Operating Temperature: $-40^\circ\text{C} \sim +125^\circ\text{C}$ (including self-heating)

Storage Temperature: $-40^\circ\text{C} \sim +125^\circ\text{C}$ (mounted on PCB)

Part Identification



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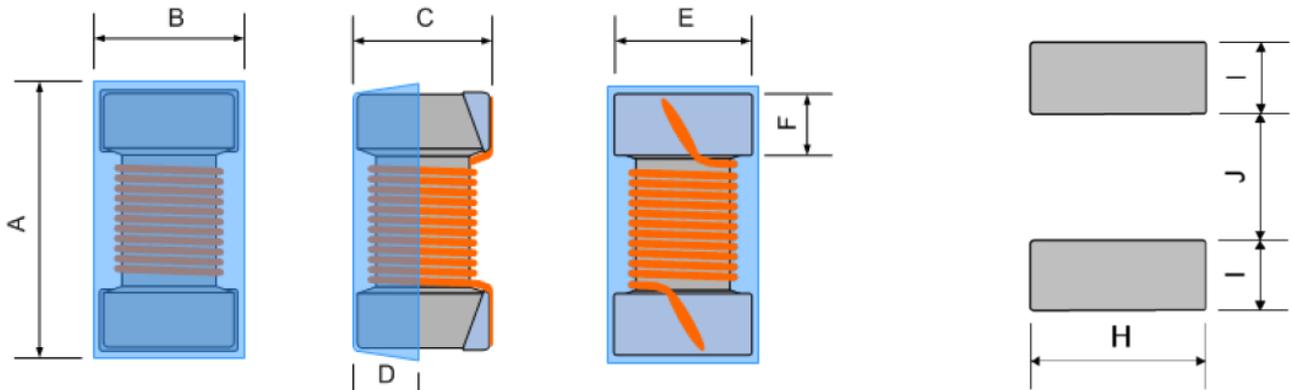


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Mechanical Specifications

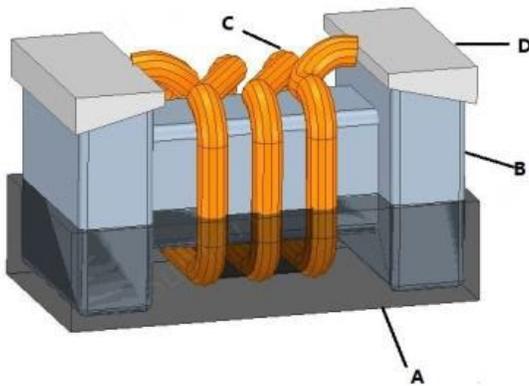


Recommend Pad Layout

A	B	C	D(typ)	E(ref)	F(ref)	H(ref)	I(ref)	J(ref)
1.10 ±0.10	0.60 ±0.10	0.50 MAX	0.16	0.50	0.20	0.65	0.30	0.50

Dimensions: mm

Materials List



Ref	Component	Material
A	Coating	Magnetic Resin
B	Core	Ferrite
C	Wire	Polyurethane enameled copper wire
D	Electrodes	Ag/Ag-Pd with Ni and Sn plating



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REVISION Initial Release :
3/30/2023

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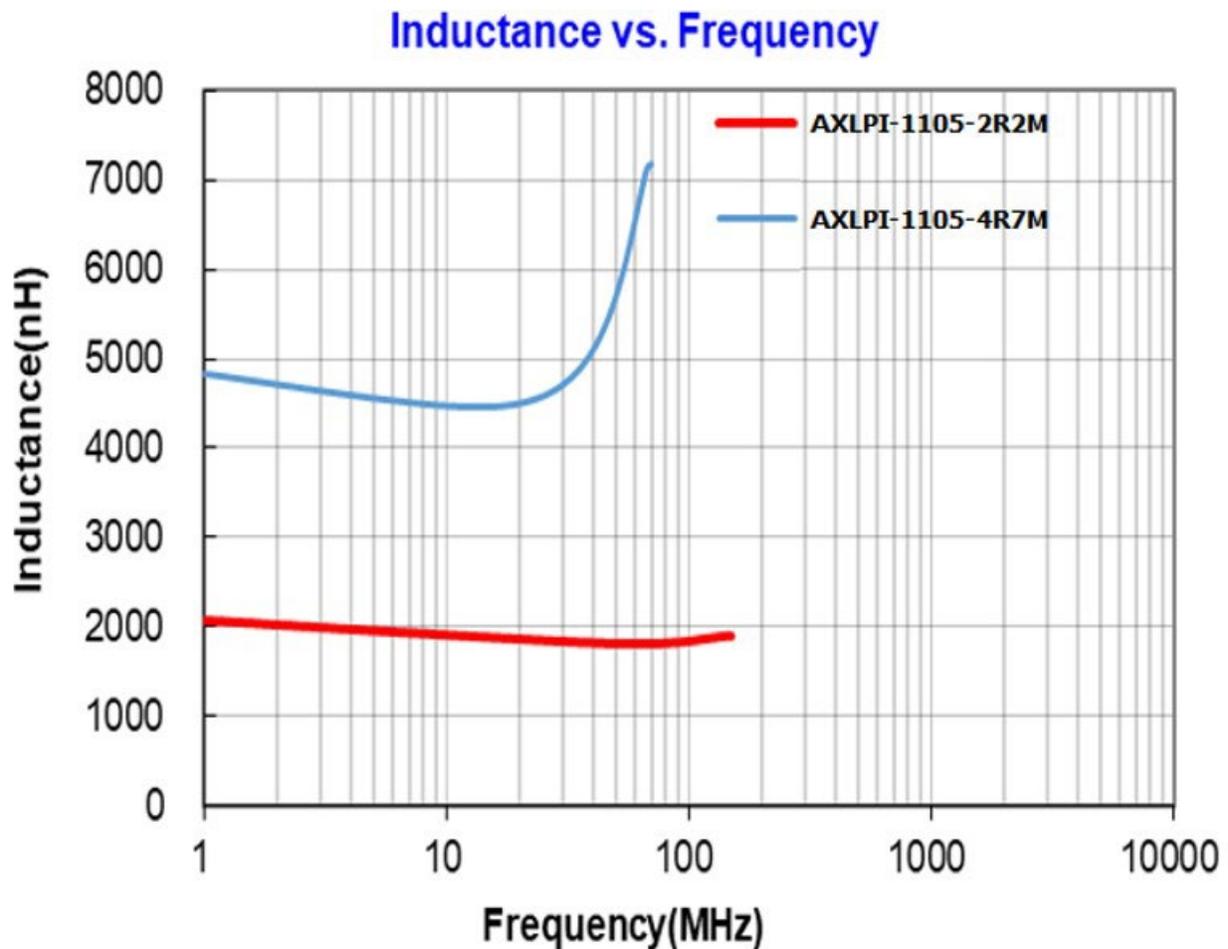
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Performance Graphs

AXLPI-1105 Series Inductance vs. Frequency



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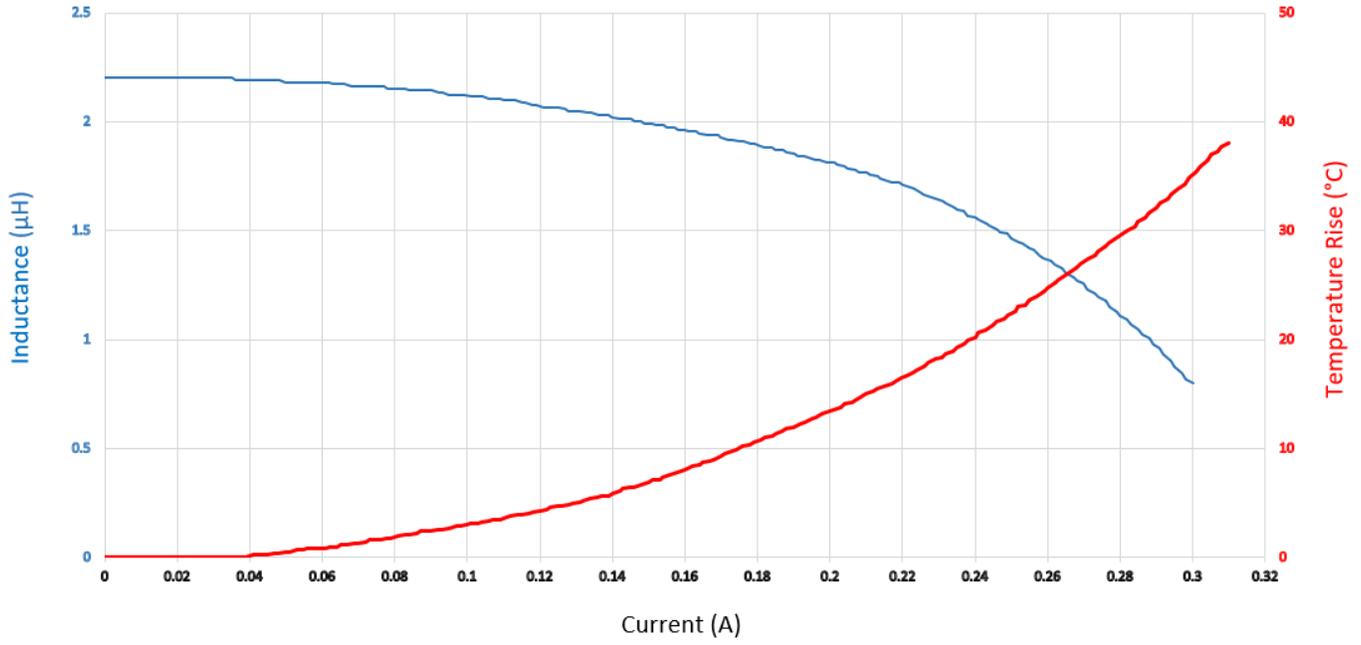


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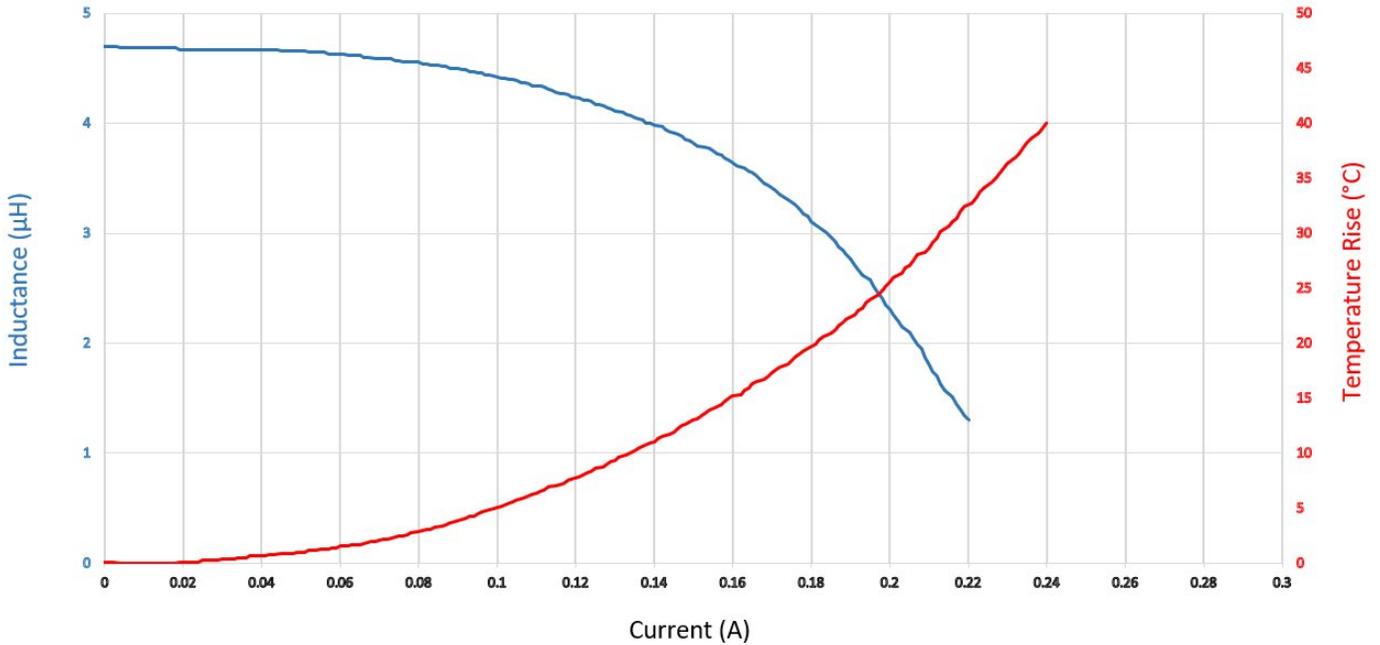


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AXLPI-1105-2R2



AXLPI-1105-4R7



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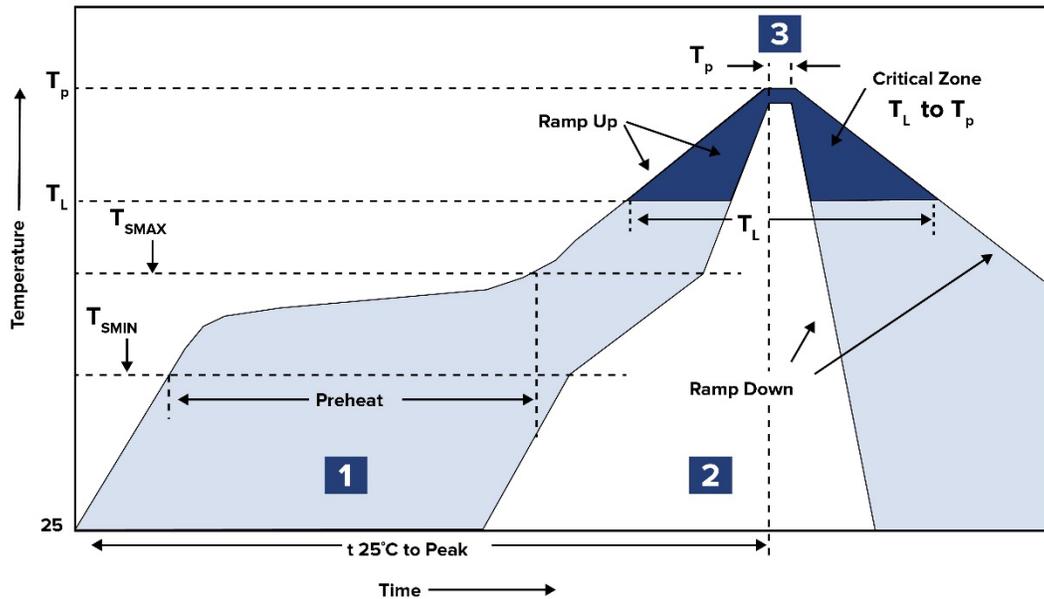


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 90 sec.
3	Peak heat	T_p 260°C±5°C	10 sec. MAX

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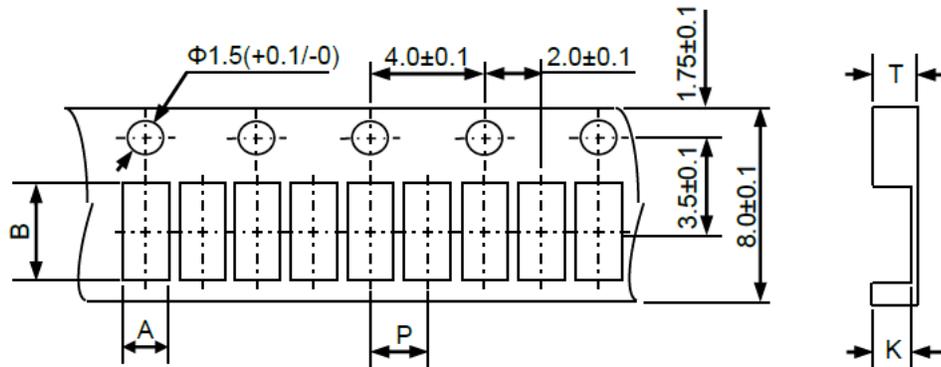
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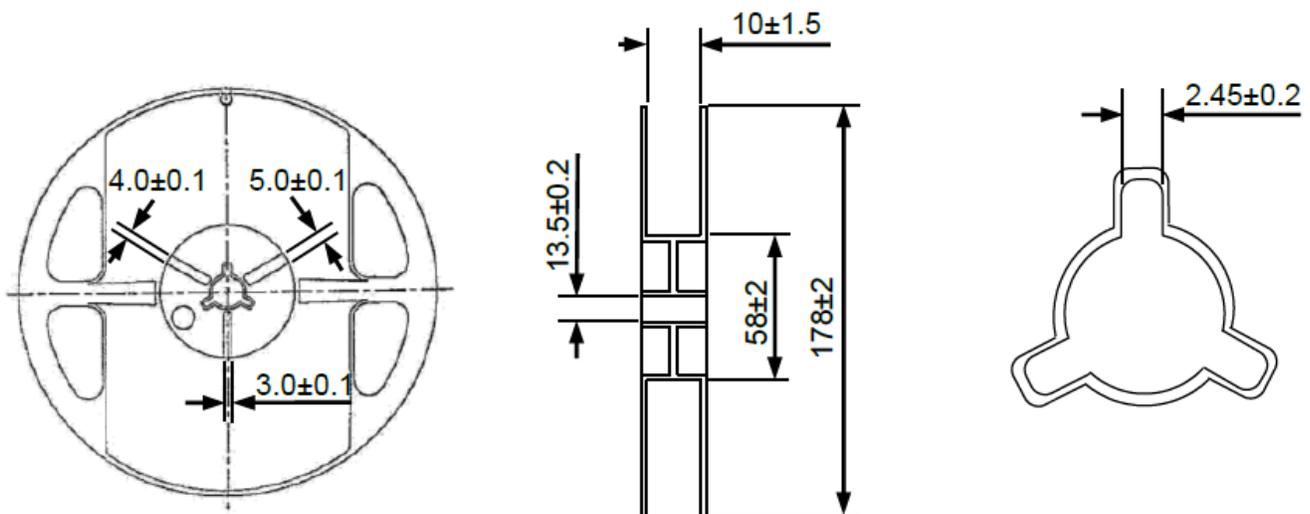
Packaging

Tape & Reel: 10K pcs/ reel



Series	A	B	P	K	T
AXLPI-1105	0.75 ± 0.10	1.20 ± 0.10	2.0 ± 0.10	0.60 ± 0.10	0.63 ± 0.10

Dimensions: mm



Dimensions: mm

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