

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($\Delta L/L_0 \leq 30\%$)

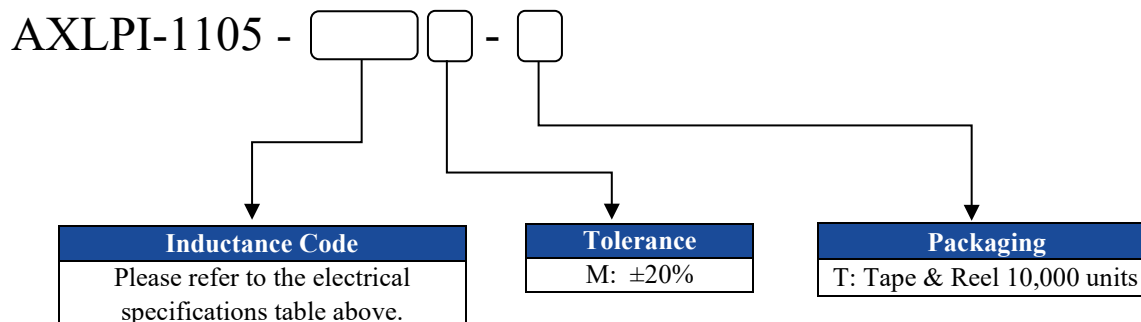
Irms : Based on Temperature change ($T = \Delta 40^\circ\text{C}$)

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



Extreme Low Profile Power Inductors



AXLPI-1105 Series

Request Samples

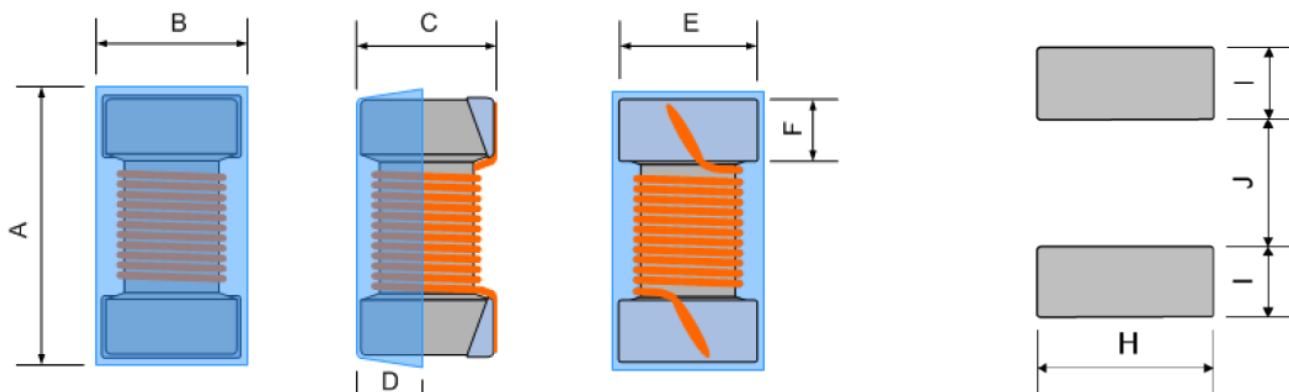


Check Inventory



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

Mechanical Specifications

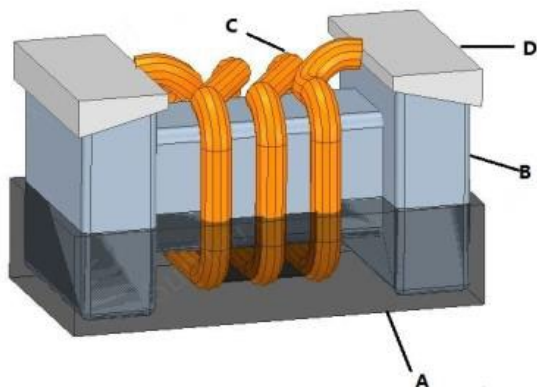


Recommend Pad Layout

| 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 |

Extreme Low Profile Power Inductors



AXLPI-1105 Series

Request Samples



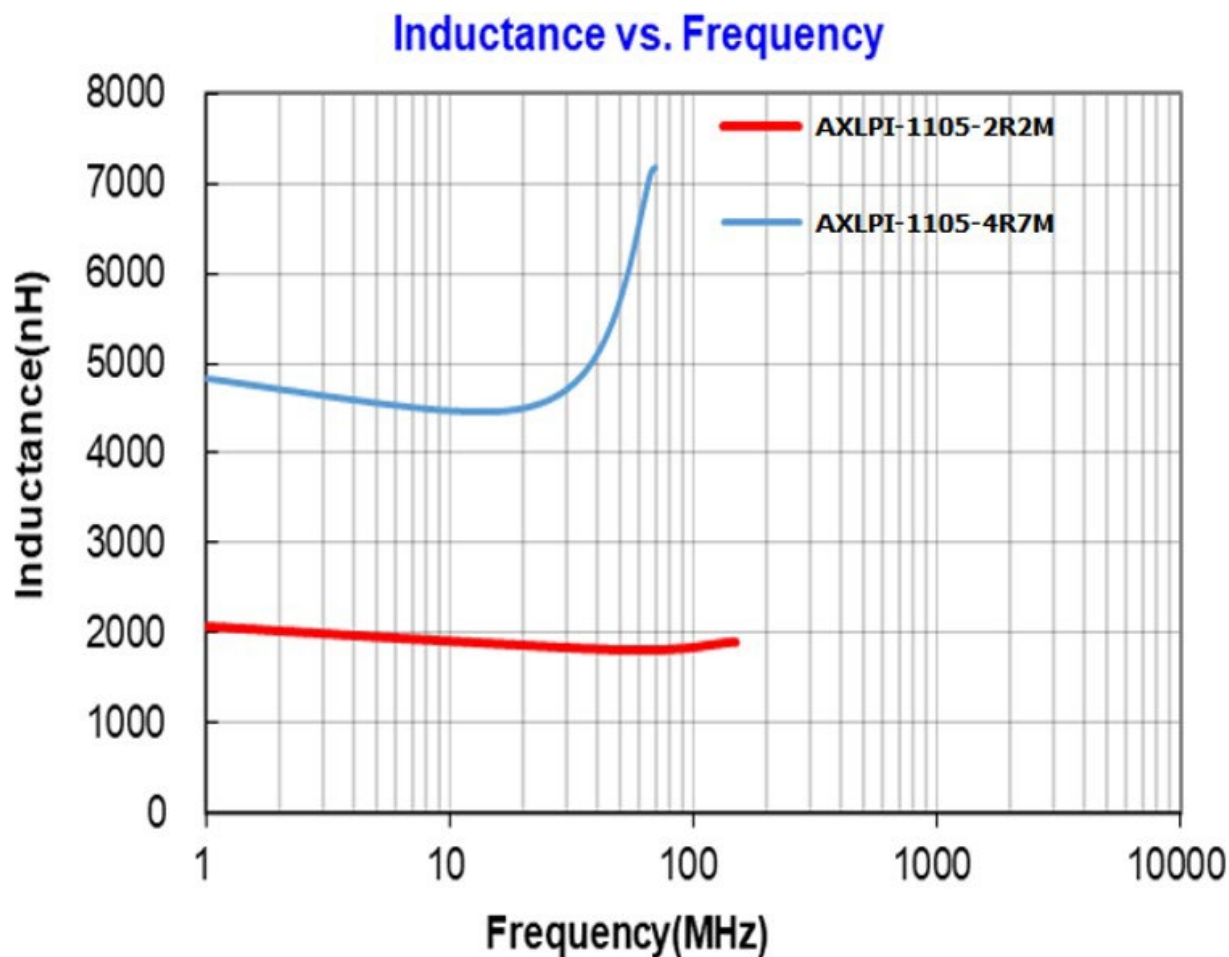
Check Inventory



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

Performance Graphs

AXLPI-1105 Series Inductance vs. Frequency



Extreme Low Profile Power Inductors



AXLPI-1105 Series

Request Samples

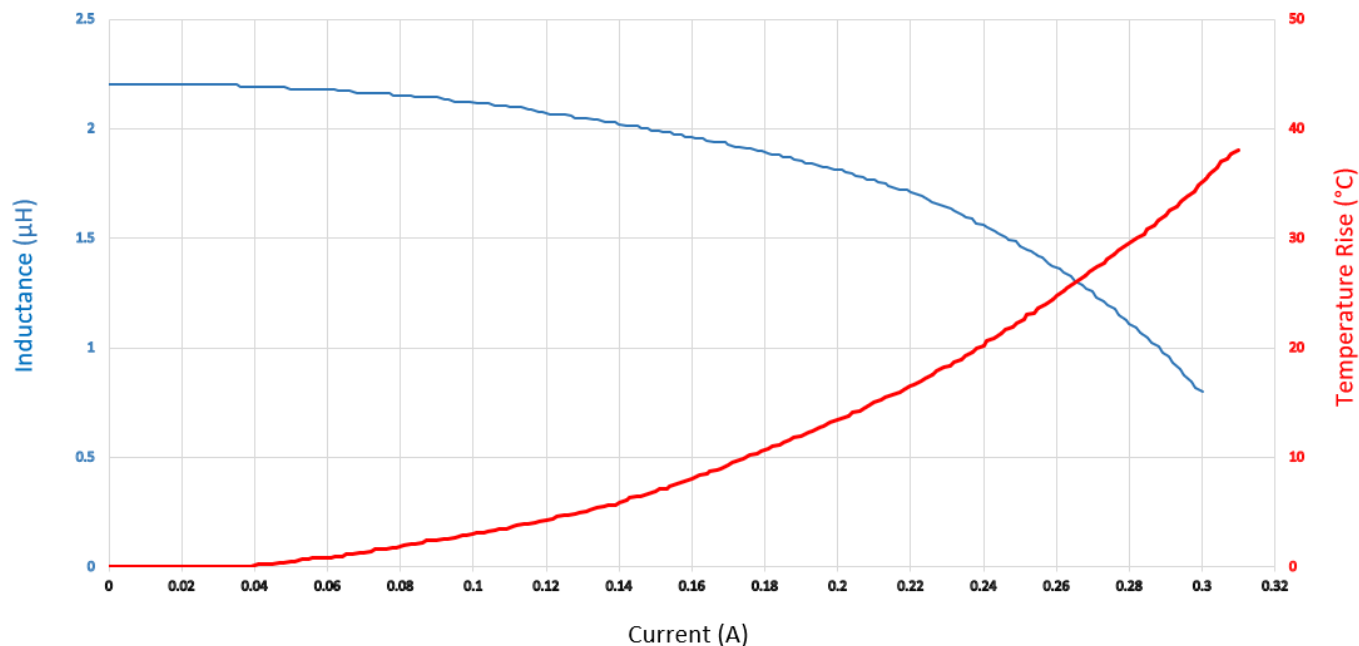


Check Inventory

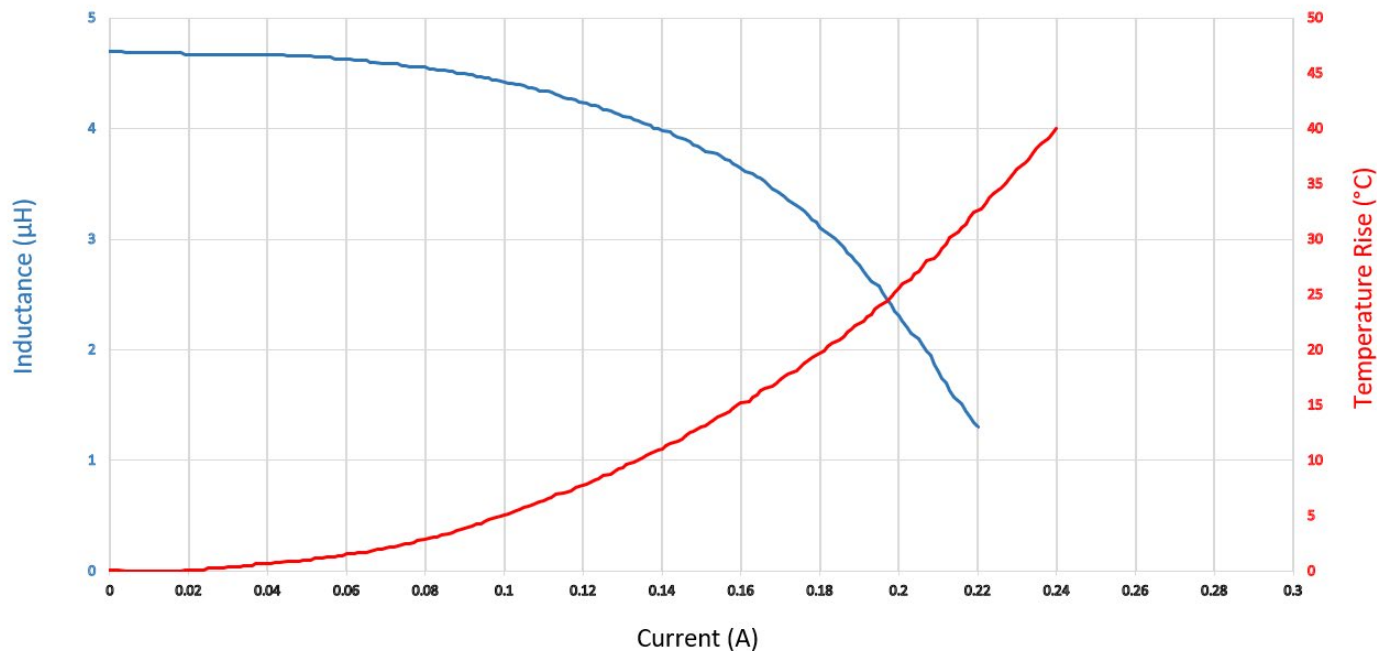


1.1 x 0.6 x 0.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

AXLPI-1105-2R2



AXLPI-1105-4R7



5101 Hidden Creek Ln, Spicewood TX 78669
Phone: 512-371-6159 Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION Initial Release :
3/30/2023

ABRACON IS
ISO9001-2015
CERTIFIED

Extreme Low Profile Power Inductors



AXLPI-1105 Series

Request Samples

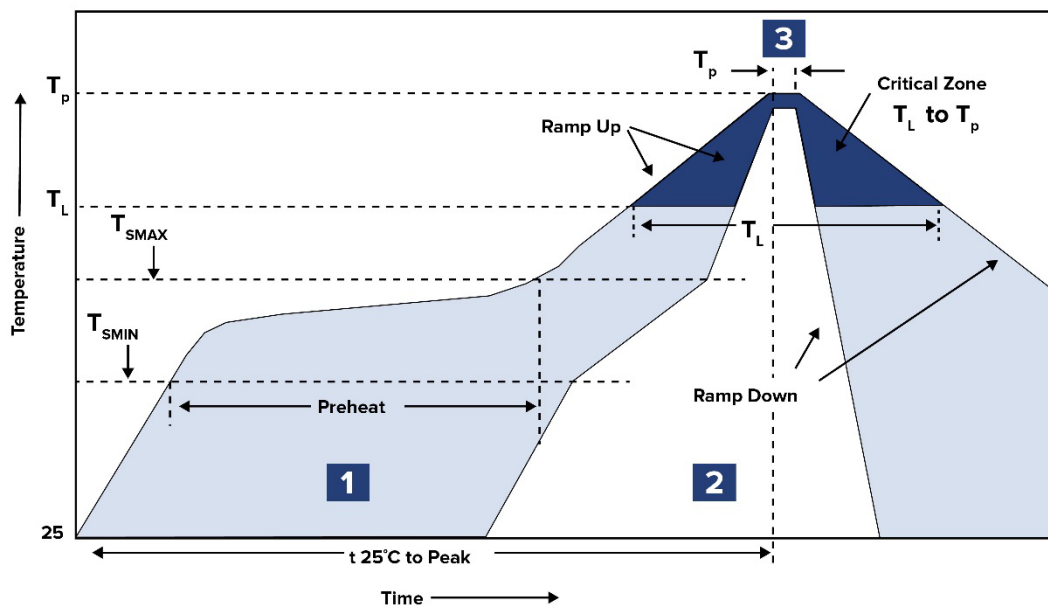


Check Inventory



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

Reflow Profile



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

Extreme Low Profile Power Inductors



AXLP1-1105 Series

Request Samples



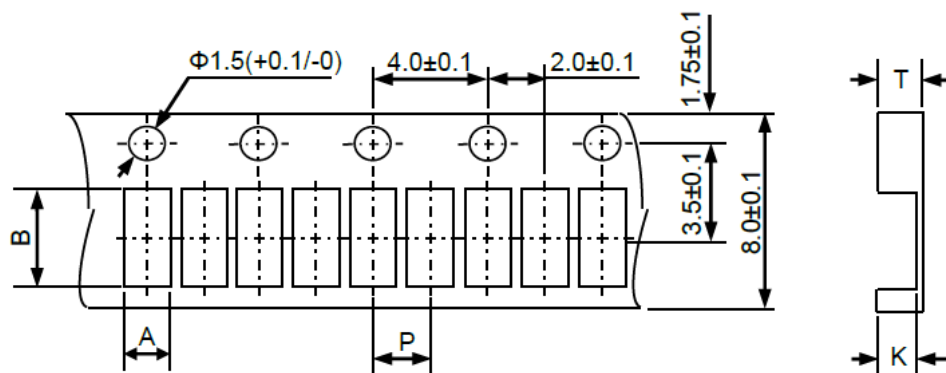
Check Inventory



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

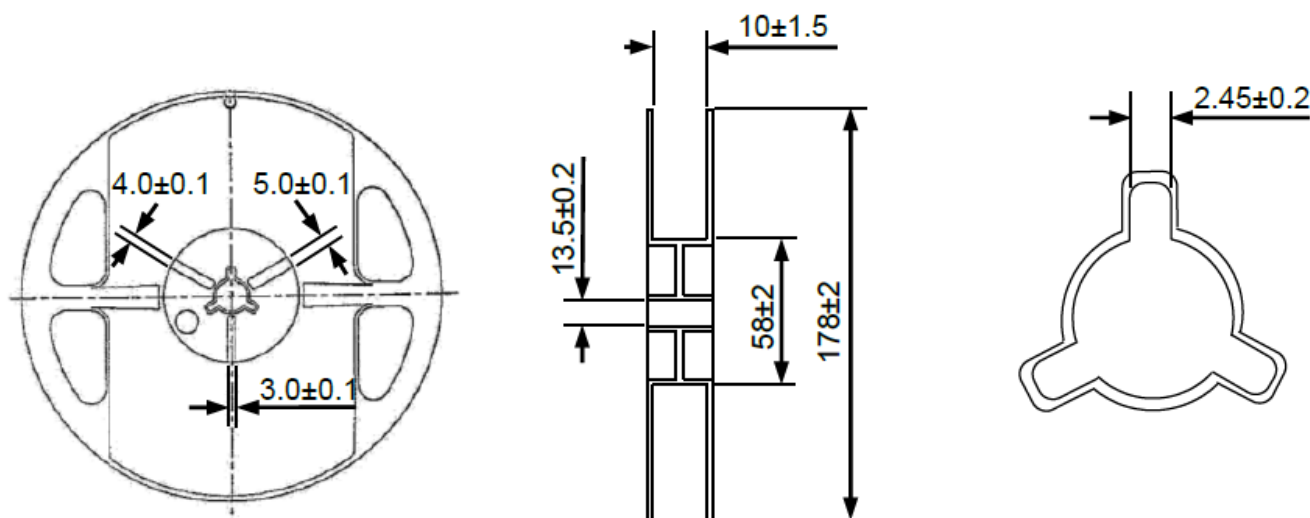
Packaging

Tape & Reel: 10K pcs/ reel



| Series | A | B | P | K | T |
|------------|-----------------|-----------------|----------------|-----------------|-----------------|
| AXLP1-1105 | 0.75 ± 0.10 | 1.20 ± 0.10 | 2.0 ± 0.10 | 0.60 ± 0.10 | 0.63 ± 0.10 |

Dimensions: mm



Dimensions: mm

ATTENTION: Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



5101 Hidden Creek Ln, Spicewood TX 78669
Phone: 512-371-6159 Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION Initial Release :
3/30/2023

ABRACON IS
ISO9001-2015
CERTIFIED