

# Extreme Low Profile Power Inductors



## AISC-040202F 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 /mm<sup>3</sup>
- 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 Max	SRF Typ.	Rated DC Current	
	( $\mu$ H)	( $\Omega$ )	(MHz)	Irms Max (mA)	Isat Typ. (mA)
AISC-040202F-2R2M-T	2.2	2.5	150	300	190
AISC-040202F-4R7M-T	4.7	3.5	70	220	150

**Isat:** Based on Inductance change ( $\Delta L/L0 \leq 30\%$ )

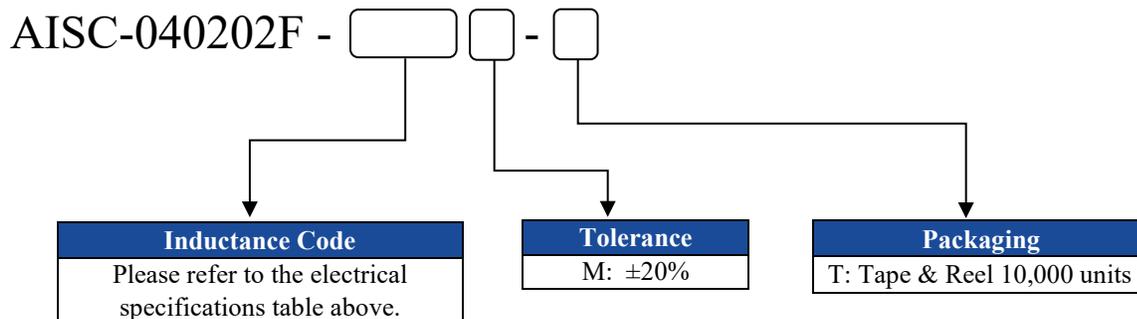
**Irms:** Based on Temperature change ( $T= \Delta 40^\circ\text{C}$ )

**Test Freq. :** 1MHz, 0.1V

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

**Storage Temperature:**  $-10^\circ\text{C} \sim 40^\circ\text{C}$  (with packaging) and RH 70% max

### Part Identification



5101 Hidden Creek Ln, Spicewood TX 78669  
Phone: 512-371-6159 Fax: 512-351-8858  
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5/9/2023

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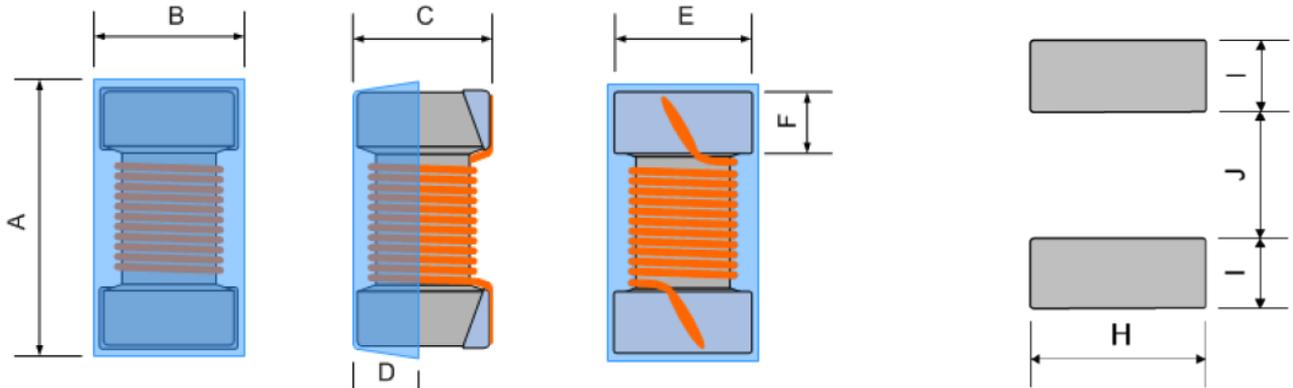


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**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Mechanical Specifications

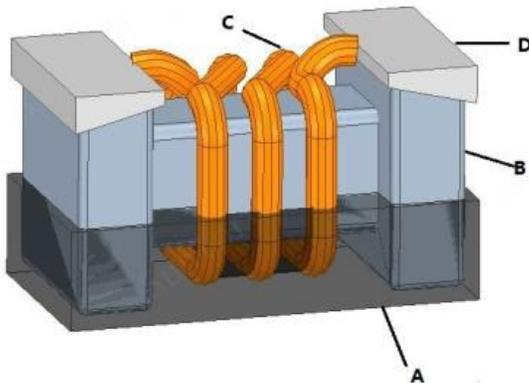


**Recommend Pad Layout**

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



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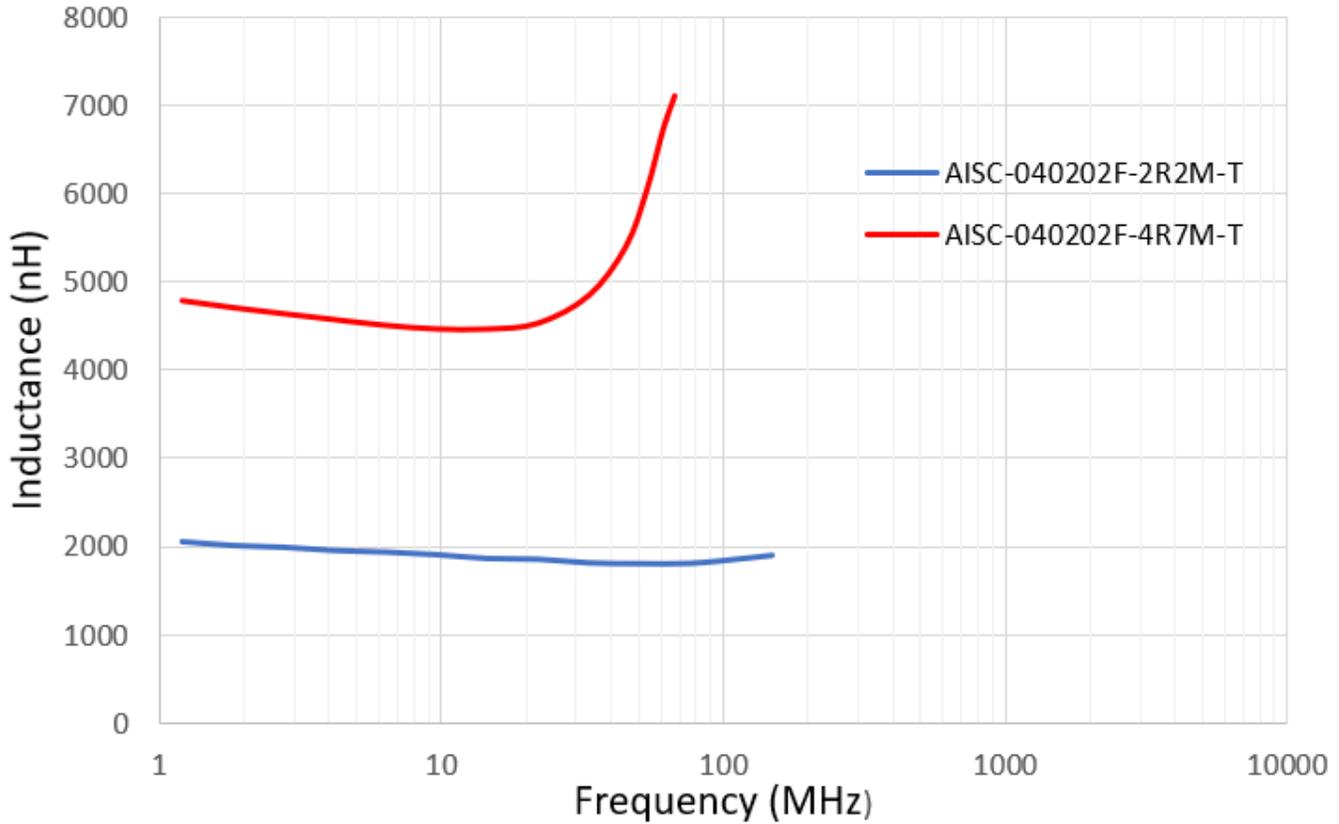
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## Performance Graphs

### AISC-040202F Series Inductance vs. Frequency



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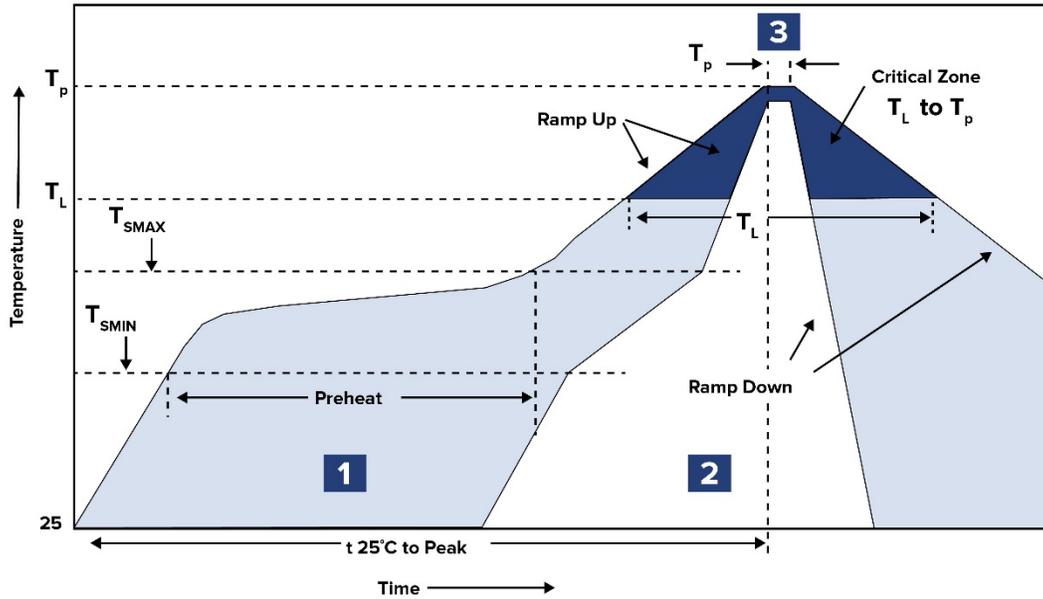


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## Reflow Profile



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 Max	10 sec. Max

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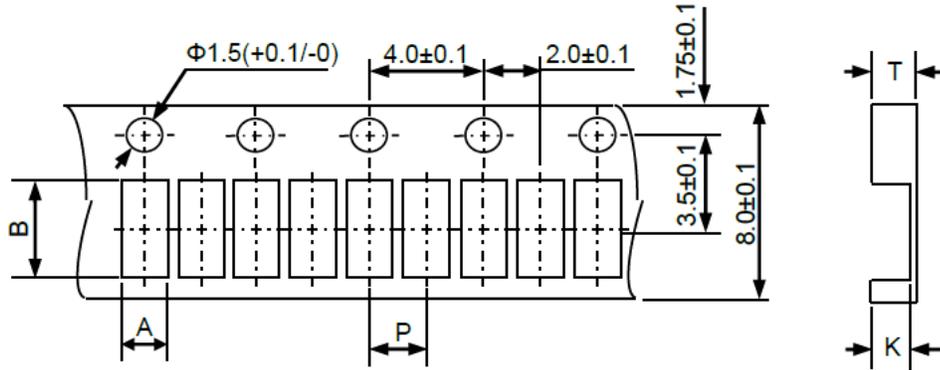
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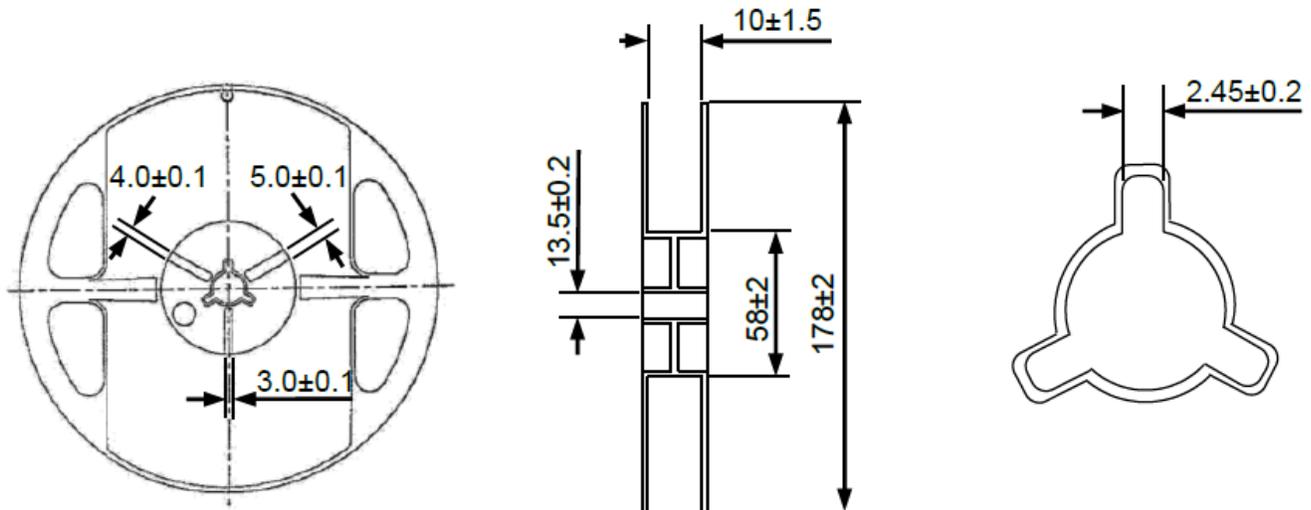
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## Packaging

**Tape & Reel: 10K pcs/ reel**



Series	A	B	P	K	T
AISC-040202F	$0.75 \pm 0.10$	$1.20 \pm 0.10$	$2.0 \pm 0.10$	$0.60 \pm 0.10$	$0.63 \pm 0.10$



Dimensions: mm

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