

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 /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 Max	SRF Typ.	Rated DC Current	
	(μH)	(Ω)	(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 ($\Delta L/L_0 \leq 30\%$)

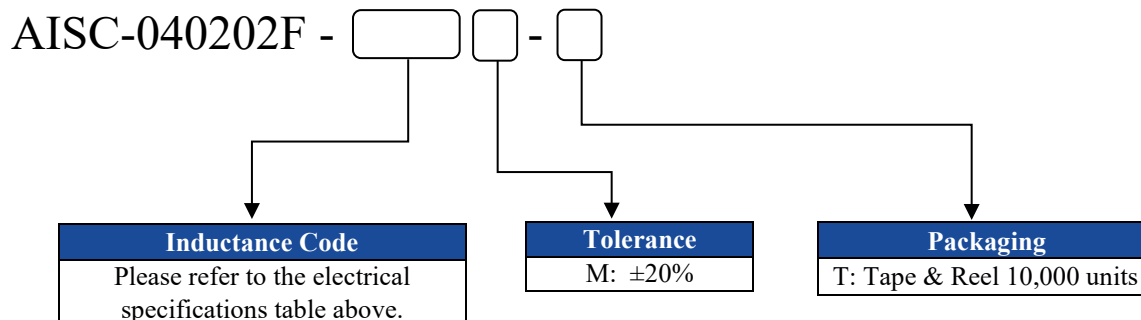
Irms: Based on Temperature change ($T = \Delta 40^\circ\text{C}$)

Test Freq. : 1MHz, 0.1V

Operating Temperature: -40°C ~ +125°C (including self-heating)

Storage Temperature: -10°C ~ 40°C (with packaging) and RH 70% max

Part Identification



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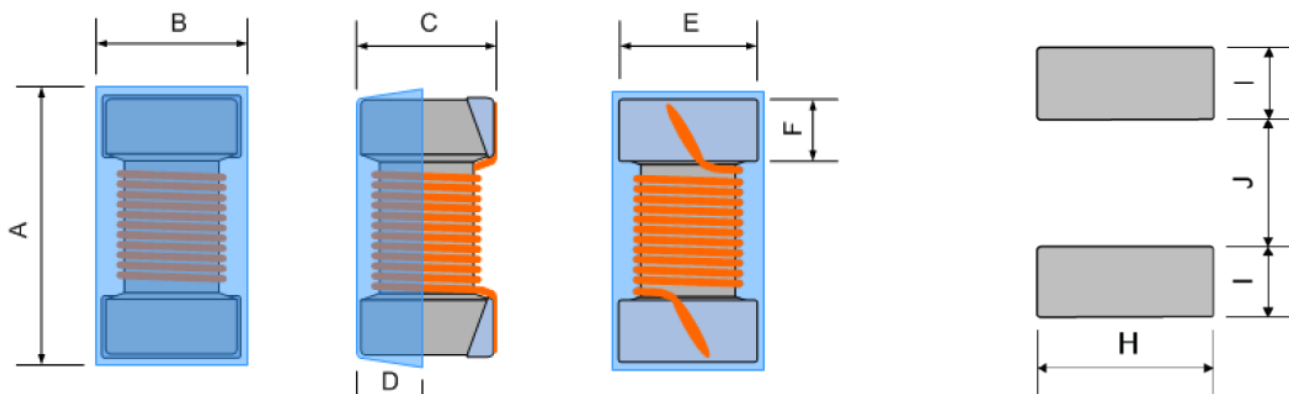


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Mechanical Specifications

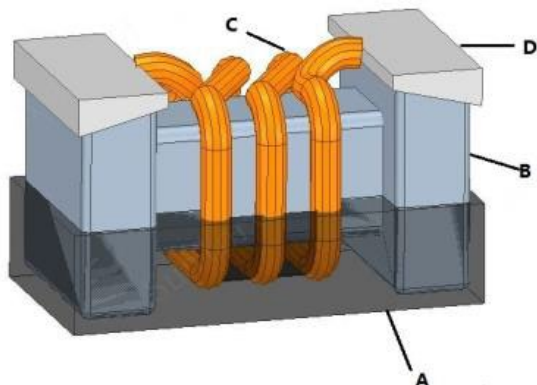


Recommend Pad Layout

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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5/9/2023

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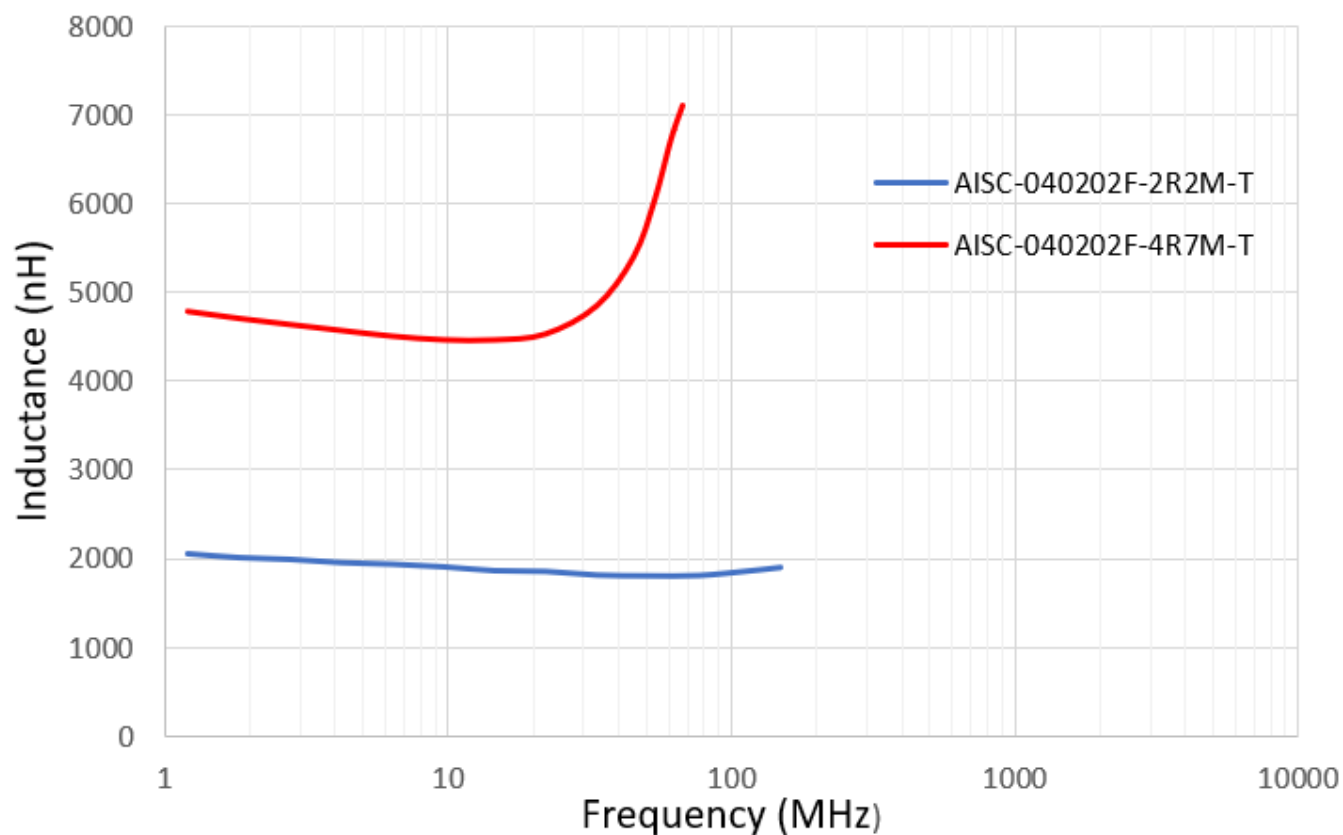
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Performance Graphs

AISC-040202F Series Inductance vs. Frequency



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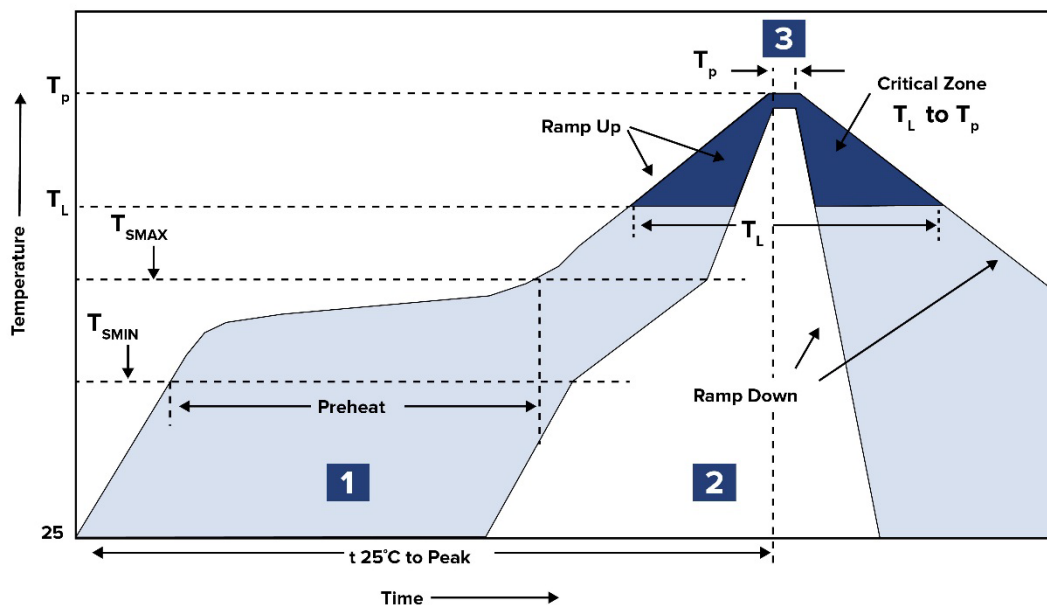


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Reflow Profile



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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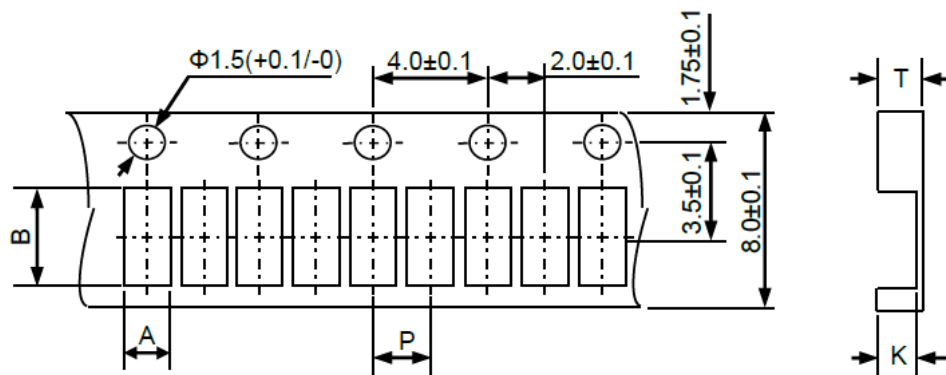
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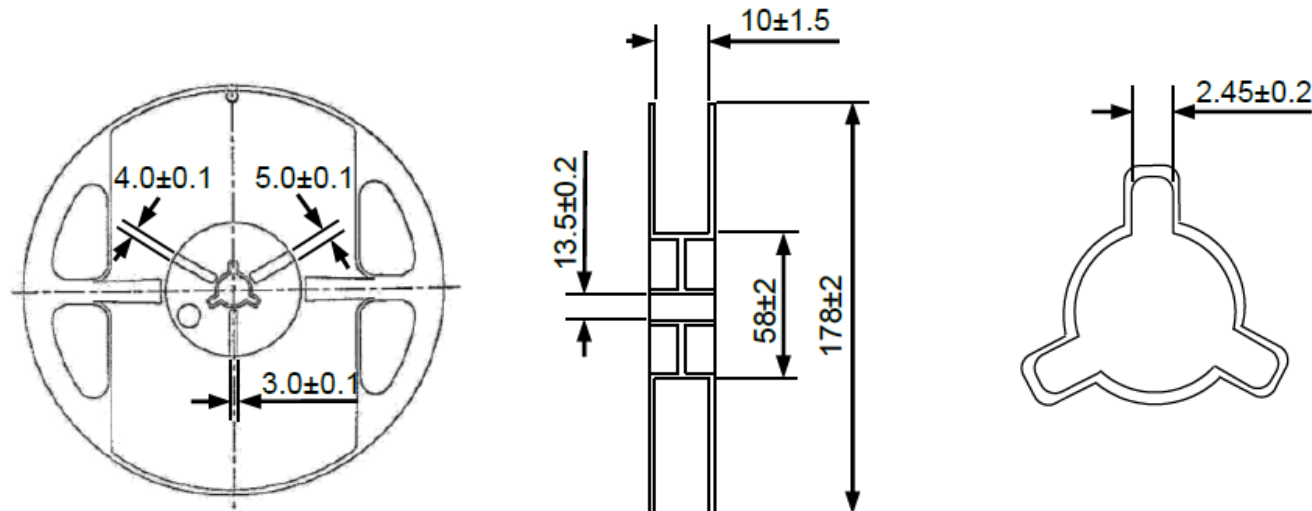
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Packaging

Tape & Reel: 10K pcs/ reel



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



Dimensions: mm

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