

## SERIES: F2D3-1265 | DESCRIPTION: HIGH CURRENT POWER INDUCTORS

### FEATURES

- Composite core
- Moisture Sensitivity: Level (MSL) 1
- Magnetic shielded structure: excellent resistance to electro magnetic interference (EMI)
- Operating temperature -40°C to 125°C



MODEL	Inductance (Lo)	Tolerance	DC Resistance (DCR)	Saturation Current (Isat)	Temperature Rise Current (Irms)
	typ [μH]	typ [± %]	max [mΩ]	typ [A]	typ [A]
F2D3-1265-1R0M	1.00	20	1.75	40.0	24.0
F2D3-1265-1R5M	1.50	20	2.65	32.0	20.0
F2D3-1265-2R2M	2.20	20	3.50	26.0	17.0
F2D3-1265-2R6M	2.60	20	4.60	24.0	15.0
F2D3-1265-3R3M	3.30	20	5.90	21.0	13.0
F2D3-1265-4R7M	4.70	20	7.10	18.0	12.0
F2D3-1265-5R6M	5.60	20	9.40	16.5	11.0
F2D3-1265-6R8M	6.80	20	10.6	15.0	9.50
F2D3-1265-8R0M	8.00	20	12.5	13.5	8.50

#### Notes:

1. Referenced ambient temperature 25°C
2. Test Condition: 100 kHz, 0.5 Vrms
3. Saturation Current - Isat: DC current (A) that will cause L0 to drop approximately 20%  
Temperature Rise Current - Irms: DC current (A) that will cause an approximate ΔT of 40°C
4. Operating temperature range includes self-temperature rise

### PART NUMBER KEY

**F2D3 - 1265 - XXX XX**

Type / Product Series

F2D3-1265 = High Current Power Inductors

Inductance Tolerance

M = ±20%

Inductance \*

1R0 = 1.0 μH

\* Note: Inductance expressed by three figures. The unit is micro henry (μH). The first and second figures are significant digits, the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "R" (3R8 = 3.8 μH). In that case, all figures are significant digits.

SAFETY AND COMPLIANCE

Parameter	Compliant
RoHS	Compliance with ROHS, Reach compliant and Halogen Free

ENVIROMENTAL

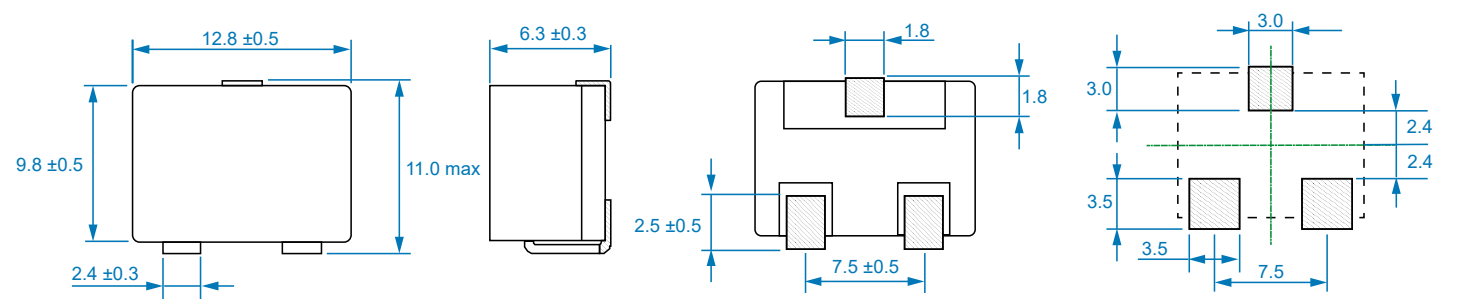
Parameter	Conditions	Min	Typ	Max	Units
Operating temperature	Including coils self-temeprature rise	-40		125	°C
Storage temperature		-40		125	°C

MECHANICAL

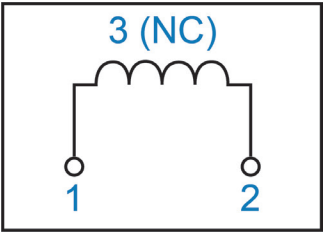
Parameter	Conditions	Min	Typ	Max	Units
Core material	Composite				
Dimensions	12.8 x 11.0 x 6.3				mm
Weight	3.91				g

MECHANICAL DRAWING

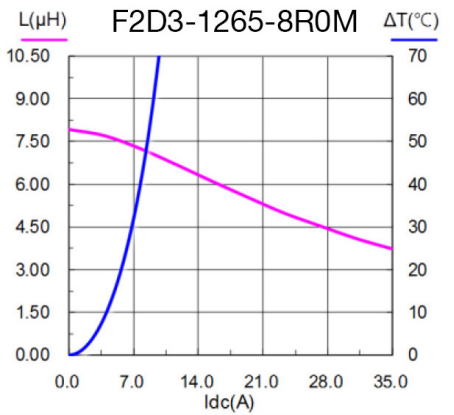
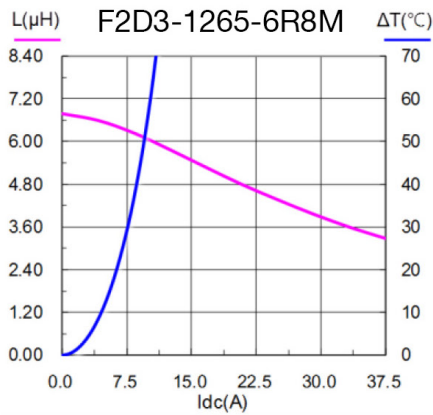
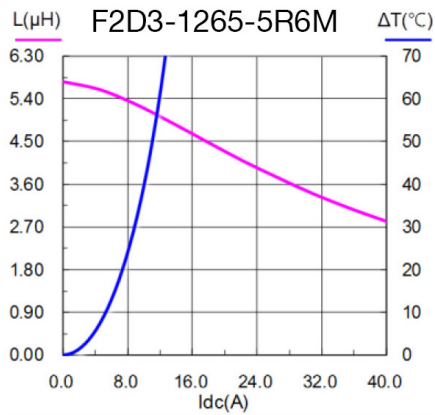
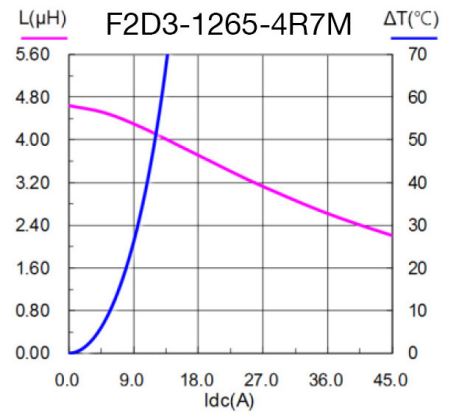
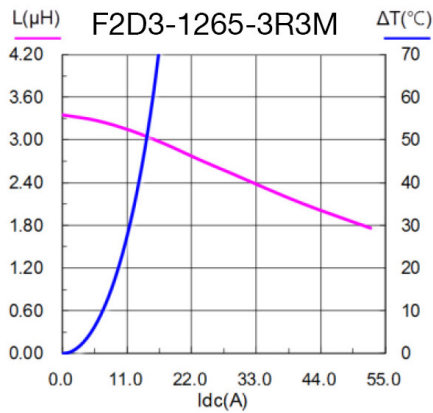
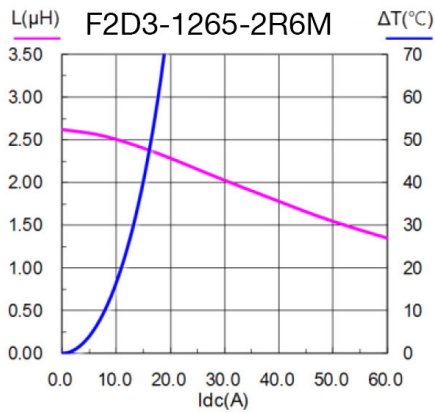
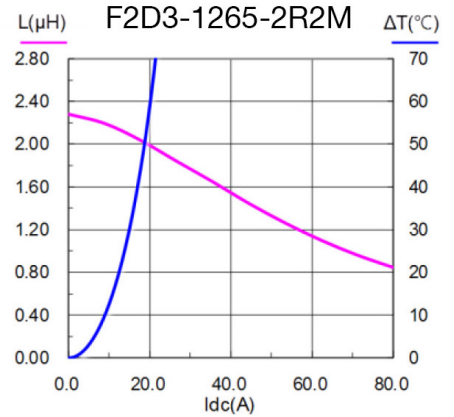
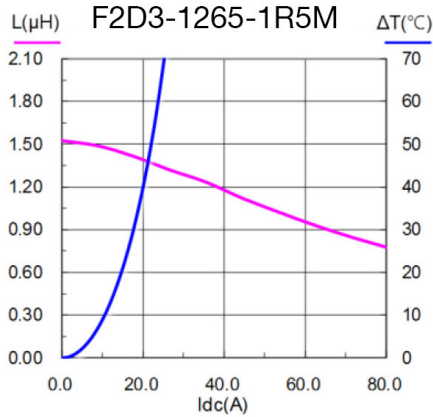
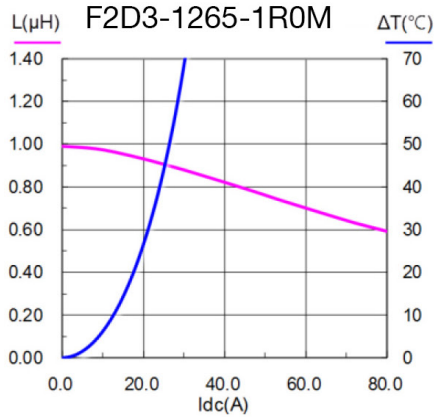
Units: mm



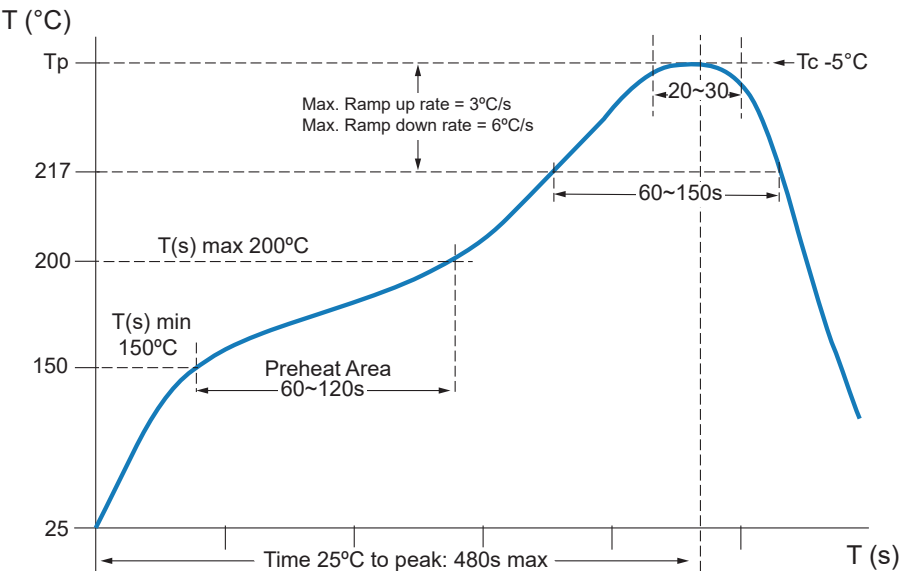
ELECTRICAL DIAGRAM



## PERFORMANCE CURVES



REFLOW SOLDERING TEMPERATURE CURVE

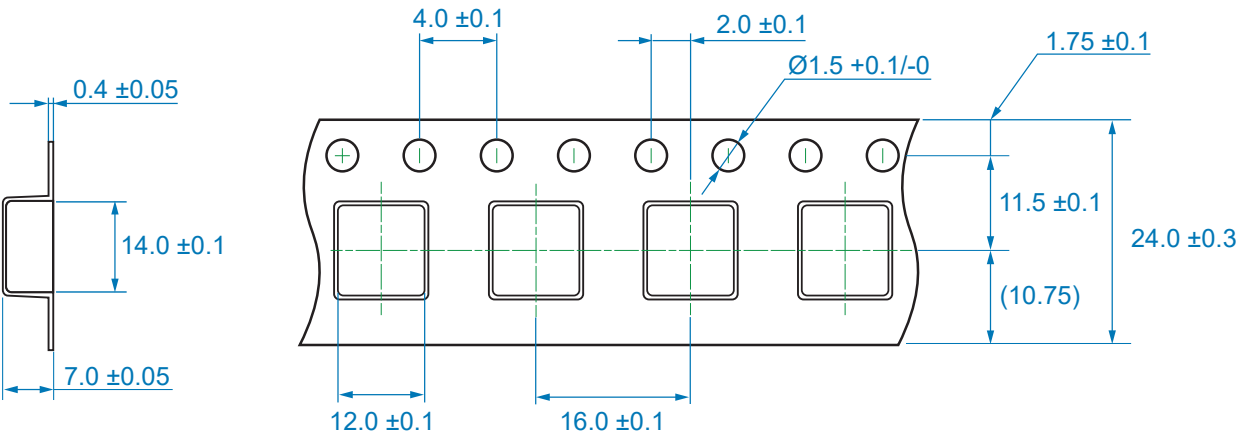


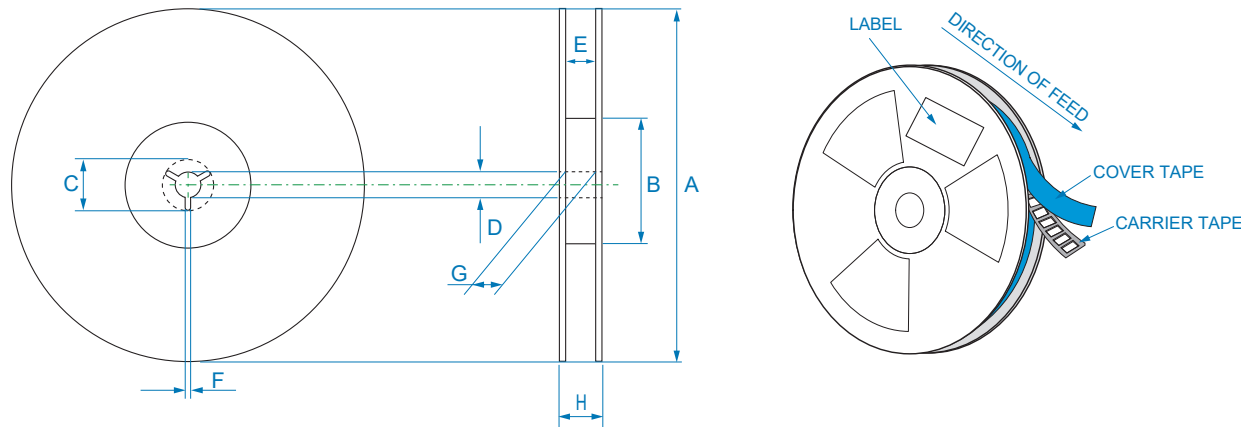
CLASSIFICATION OF PEAK PACKAGE BODY TEMPERATURE

	Package Thickness	Package Volume		
		< 350 mm <sup>3</sup>	350 ~ 2000 mm <sup>3</sup>	> 2000 mm <sup>3</sup>
PB-Free Assembly	< 1.6 mm	260 $^{\circ}\text{C}$	260 $^{\circ}\text{C}$	260 $^{\circ}\text{C}$
	1.6 ~ 2.5 mm	260 $^{\circ}\text{C}$	250 $^{\circ}\text{C}$	245 $^{\circ}\text{C}$
	$\geq 2.5$ mm	250 $^{\circ}\text{C}$	245 $^{\circ}\text{C}$	245 $^{\circ}\text{C}$

QUANTITY PER REEL & PACKING INFORMATION

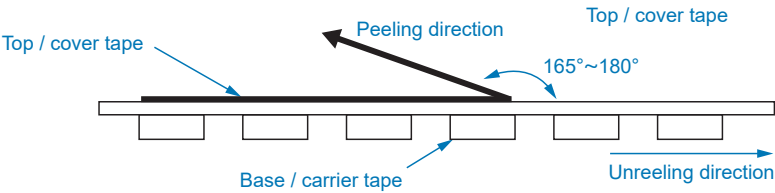
Units: mm





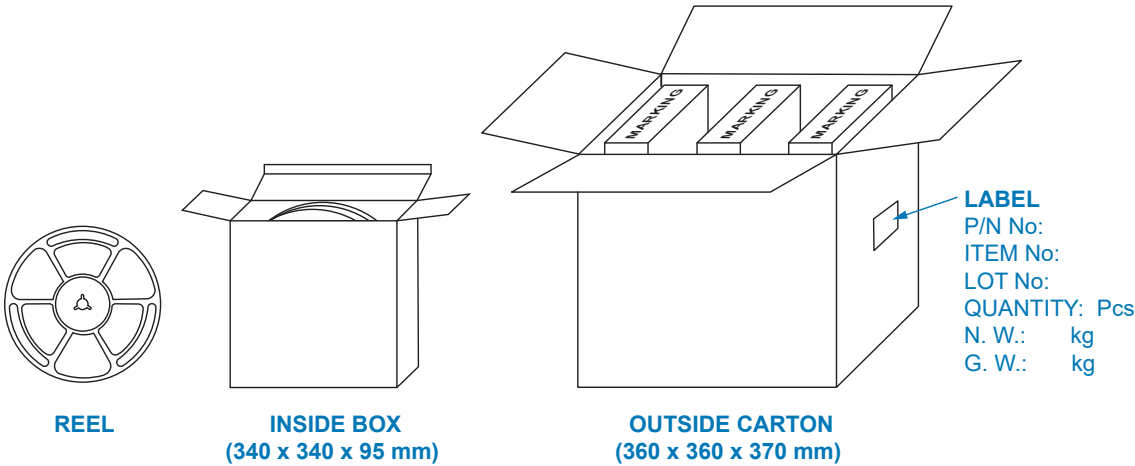
REEL DIMENSIONS (mm)

Product Series	A	B	C	D	E	F	G	H
F2D3-1265	330 ± 2.0	100 min	21.0 ± 0.8	13.0 ± 0.5	23.90 min	2.0 ± 0.5	24.4 +2.0/-0	30.40 max



Peel-off Force

The peel-off speed shall be about 300 ±10 mm/min.  
The peel-off force of top cover tape shall be between 0.1 to 1.3 N.



QUANTITY PER PACKAGE

Product Series	Pcs per Reel	Pcs per Inside Box	Pcs per Outside Carton
F2D3-1265	400	800	2400

Storage Conditions

- a) Product in packing storage condition: temperature 5 ~ 40 °C, RH ≤ 70 %.
- b) Avoid storing in environments prone to high temperatures, excessive humidity, dust, or corrosion.

REVISION HISTORY

Rev.	Description	Date
1	initial release	November/22/2024

**NUCLEAR AND MEDICAL APPLICATIONS** - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

**TECHNICAL REVISIONS** - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.