

SERIES: F2D1-3517A | DESCRIPTION: HIGH CURRENT POWER INDUCTORS

FEATURES

- Ferrite core
- Moisture sensitivity: Level (MSL) 1
- High inductance, high current, low magnetic loss, low ESR, small parasitic capacitance
- Operating temperature -40°C to 125°C



MODEL	Inductance (Lo) typ [μH]	Tolerance typ [± %]	DC Resistance (DCR) max [mΩ]	Saturation Current (Isat) typ [A]	Temperature Rise Current (Irms) typ [A]
F2D1-3517A-1R5MC	1.50	20	0.40	113	65.0
F2D1-3517A-2R2MC	2.20	20	0.40	94.0	65.0
F2D1-3517A-3R3MC	3.30	20	0.63	76.0	52.0

Notes:

- Referenced ambient temperature 25°C
- Test Condition: 100 kHz, 0.1 Vrms
- Saturation Current - Isat: The actual value of DC current (A) when the Inductance decrease 30% of its initial value.
Temperature Rise Current - Irms: The actual value of DC current (A) when the Temperature rise is ΔT 40°C ($T_a = 25^\circ\text{C}$)
- Operating temperature range includes self-temperature rise.
- Important Reminder: The product temperature can be influenced by various factors such as circuit design, component placement, PCB size and thickness, and the cooling system. Please ensure to verify the product temperature in its final application.

PART NUMBER KEY

F2D1 - 3517A - XXX XX

Type / Product Series

F2D1-3517A = High Current Power Inductors

C = Coating

Inductance *

1R0 = 1.0 μH

Inductance Tolerance

M = ±20%

* 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

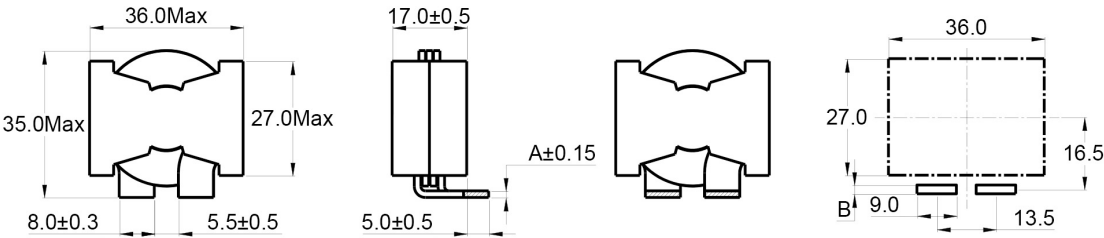
Parameter	Conditions	Min	Typ	Max	Units
Operating temperature	Including coils self-temeprature rise	-40		125	°C
Storage temperature		-40		125	°C

MECHANICAL

Parameter	Conditions	Min	Typ	Max	Units
Core material	Ferrite				
Dimensions	36.0 x 35.0 x 27.0				mm

MECHANICAL DRAWING

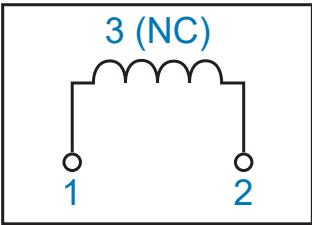
Units: mm



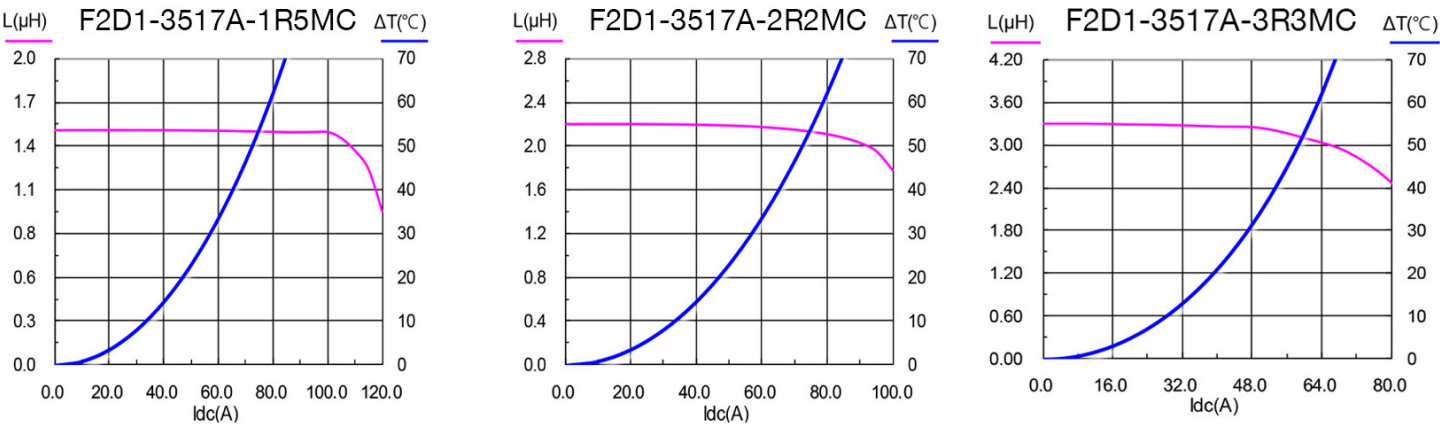
MECHANICAL DIMENSIONS (mm)

Part number	1R5-2R2	3R3
Dimension A	1.50	1.30
Dimension B	2.00	1.80

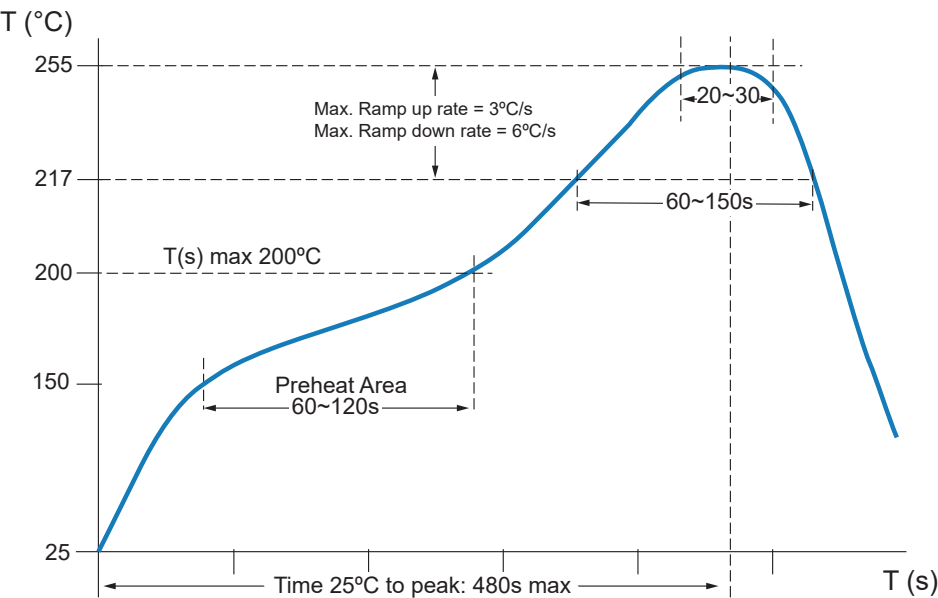
ELECTRICAL DIAGRAM



PERFORMANCE CURVES



REFLOW SOLDERING TEMPERATURE CURVE

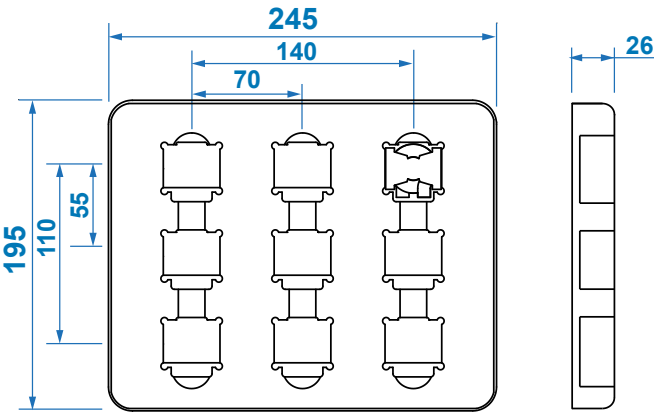


CLASSIFICATION OF PEAK PACKAGE BODY TEMPERATURE

	Package Thickness	Package Volume		
		< 350 mm ³	350 ~ 2000 mm ³	> 2000 mm ³
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 $^{\circ}\text{C}$

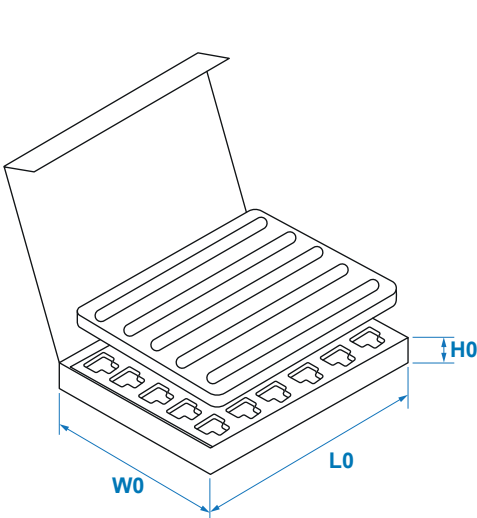
QUANTITY PER TRAY & PACKING INFORMATION

Units: mm

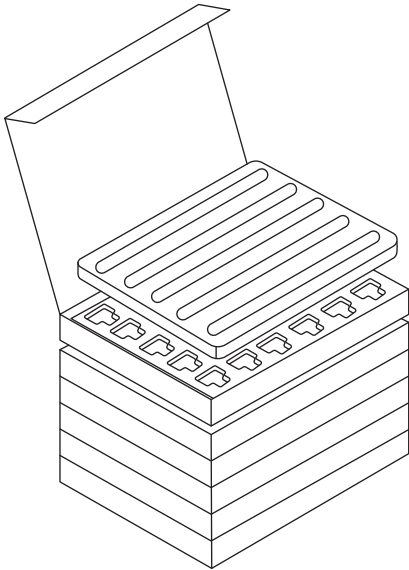


PACKAGING DIMENSIONS (mm)

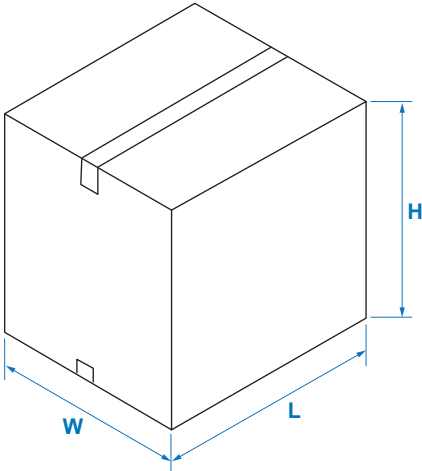
Product Series	L0	W0	H0	L	W	H
F2D1-3517A	265	205	32	275	232	261



INSIDE BOX



OUTSIDE CARTON



QUANTITY PER PACKAGE

Product Series	Pcs per Tray	Qty of Inner Carton	Pcs per Outside Carton
F2D1-3517A	9	7	63

REVISION HISTORY

Rev.	Description	Date
1	initial release	December/01/2024

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.