

SCOPE :

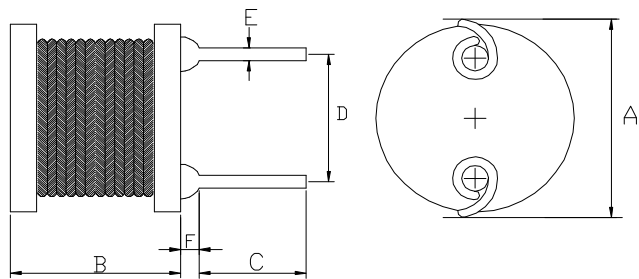
This specification applies to the current type Radial Leaded Inductor
for MCD-1216-SERIES

PRODUCT IDENTIFICATION

MCD - 1216 - 150 M
① ② ③ ④

- ① Product Code
- ② Dimensions Code
- ③ Inductance Code
- ④ Tolerance Code

(1) SHAPES AND DIMENSIONS



A: 15.0 Max.	mm
B: 16.5 Max.	mm
C: 15.0±2.0	mm
D: 7.5±0.5	mm
E: φ0.8±0.1	mm
F: 2.5 Max.	mm

(2) ELECTRICAL SPECIFICATIONS
SEE TABLE 1

TEST INSTRUMENTS

- L : HP 4284A PRECISION LCR METER (or equivalent)
- RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

(3) CHARACTERISTICS

- (3)-1 Ambient temperature +60℃ Max.
- (3)-2 Operate temperature range -40℃ ~ +125℃
(Including self temp. rise)
- (3)-3 Storage temperature range -40℃ ~ +125℃

TABLE 1

MAGLAYERS PT/NO.	Inductance L(μH)	Percent Tolerance	Test Frequency	Resistance RDC(Ω)Max.	Rated DC Current	
					IDC1(A)	IDC2(A)
MCD-1216-100□	10	K,M	100kHz/0.25V	19m	10.0	6.80
MCD-1216-120□	12	K,M	100kHz/0.25V	23m	8.8	6.40
MCD-1216-150□	15	M	100kHz/0.25V	27m	8.5	5.90
MCD-1216-220□	22	M	100kHz/0.25V	29m	7.0	5.40
MCD-1216-101□	100	K,M	100kHz/0.25V	0.15	2.4	3.20
MCD-1216-221□	220	K,M	100kHz/0.25V	0.31	1.60	2.15
MCD-1216-271□	270	K,M	100kHz/0.25V	0.40	1.45	2.00
MCD-1216-331□	330	K,M	100kHz/0.25V	0.46	1.30	1.75
MCD-1216-391□	390	K,M	100kHz/0.25V	0.58	1.15	1.70
MCD-1216-471□	470	K,M	100kHz/0.25V	0.70	1.00	1.50
MCD-1216-561□	560	K,M	100kHz/0.25V	0.75	0.95	1.35
MCD-1216-681□	680	K,M	100kHz/0.25V	0.80	0.90	1.30
MCD-1216-821□	820	K,M	100kHz/0.25V	0.85	0.80	1.10
MCD-1216-102□	1000	K,M	100kHz/0.25V	0.90	0.75	1.00
MCD-1216-302□	3000	K,M	10kHz/0.25V	2.79	0.53	0.60
MCD-1216-332□	3300	K,M	10kHz/0.25V	2.89	0.52	0.55
MCD-1216-402□	4000	K,M	10kHz/0.25V	3.73	0.49	0.50

※ □ Specify the inductance tolerance, K(±10%), M(±20%)

※ IDC1 : Based on inductance change ($\Delta L/L_0$: drop 10% Max) @ ambient temp. 25°C

IDC2 : Based on temperature rise (ΔT : 40°C TYP.)

Rated DC Current : The less value which is IDC1 or IDC2.



(4) RELIABILITY TEST METHOD MECHANICAL

NO.	ITEMS	SPECIFICATIONS	CONDITIONS
1	Solderability test	More than 90% of the terminal electrode should be covered with solder.	Dipping: $245 \pm 5^{\circ}\text{C}$, 3 ± 1 seconds
2	lead tensile strength test	1.0 Kg MIN.	The lead of product is pulled with a load of 1.0kg minimum until lead breakdown. The tensile force shall be recorded.
3	Vibration test	$\Delta L/L \leq \pm 7\%$ Visual:OK	The product is fixed into the vibration with amplitude of 1.52m/m at a frequency of 10~55Hz sweeping for 1min. The vibration is done at X,Y, Z direction respectively for 2 hours, totally 6 hours.
4	Soldering heat resistance test	Visual:OK Circuit:OK	The leads of product are dipped into a solder pot of $260 \pm 5^{\circ}\text{C}$ for a duration of 10 ± 1 sec. Nothing particular on visual and open circuitry as a result of ore testing.

ENVIRONMENTAL

NO.	ITEMS	SPECIFICATIONS	CONDITIONS
1	Humidity endurance test	$\Delta L/L \leq \pm 5\%$	The product is placed in a chamber of $40 \pm 2^{\circ}\text{C}$, 90~95%RH for 96 hours. Measurement is done after the recovery of 4~24 hours.
2	High temp endurance test	$\Delta L/L \leq \pm 5\%$	The product is placed in a chamber of $80 \pm 2^{\circ}\text{C}$, for 72 hours. Measurement is done after recovery of 4~24 hours.
3	Low temp test	$\Delta L/L \leq \pm 5\%$	The product is placed in a chamber of $-40 \pm 2^{\circ}\text{C}$, for 96 hours. Measurement is done after recovery of 4~24 hours.
4	Thermal shock test	$\Delta L/L \leq \pm 5\%$	The specimens are placed in a chamber and the temp is then lowered to $-20 \pm 2^{\circ}\text{C}$ for one hour. The temp will raised to $+80 \pm 2^{\circ}\text{C}$ for one hour. This constitutes one cycle. Ten cycles of such testing shall be completed. Measurement is made after recovery for 4~24 hours from the completion of testing.



(5) PACKAGE SPECIFICATION (mm)

