

SCOPE :

This specification applies to the current type Radial Leaded Inductor
for MCD-110C-SERIES

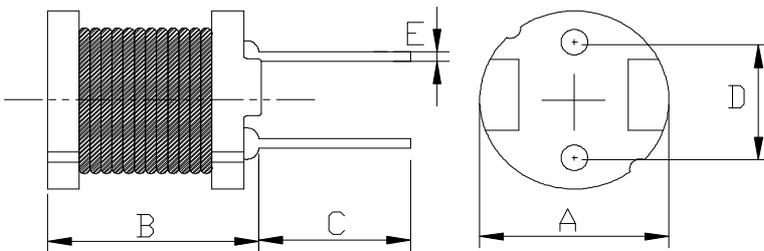
PRODUCT IDENTIFICATION

MCD - 110C - 100 M

① ② ③ ④

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

(1) SHAPES AND DIMENSIONS



A: 10 ± 0.5	mm
B: 10.5 Max.	mm
C: 15 ± 2.0	mm
D: 6.5 ± 0.5	mm
E: $\phi 0.65\pm 0.1$	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 $+60^{\circ}\text{C}$ Max.
- (3)-2 Operate temperature range $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
(Including self temp. rise)
- (3)-3 Storage temperature range $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$



MAG.LAYERS

TABLE 1

MAGLAYERS PT/NO.	Inductance L(μ H)	Percent Tolerance	Test Frequency	Resistance RDC(Ω)Max.	Rated DC Current IDC(A)
MCD-110C-100□	10	M	100kHz/0.25V	22m	5.3
MCD-110C-120□	12	M	100kHz/0.25V	23m	4.9
MCD-110C-150□	15	M	100kHz/0.25V	26m	4.4
MCD-110C-180□	18	M	100kHz/0.25V	33m	4.0
MCD-110C-220□	22	K,M	100kHz/0.25V	37m	3.6
MCD-110C-270□	27	M	100kHz/0.25V	48m	3.3
MCD-110C-330□	33	K,M	100kHz/0.25V	55m	2.9
MCD-110C-390□	39	K,M	100kHz/0.25V	73m	2.7
MCD-110C-470□	47	K,M	100kHz/0.25V	83m	2.5
MCD-110C-560□	56	K,M	100kHz/0.25V	92m	2.3
MCD-110C-680□	68	K,M	100kHz/0.25V	0.12	2.1
MCD-110C-820□	82	K,M	100kHz/0.25V	0.14	1.9
MCD-110C-101□	100	K,M	100kHz/0.25V	0.16	1.7
MCD-110C-121□	120	K,M	100kHz/0.25V	0.20	1.5
MCD-110C-151□	150	K,M	100kHz/0.25V	0.23	1.4
MCD-110C-181□	180	K,M	100kHz/0.25V	0.31	1.3
MCD-110C-221□	220	K,M	100kHz/0.25V	0.34	1.1
MCD-110C-271□	270	K,M	100kHz/0.25V	0.40	1.0
MCD-110C-331□	330	K,M	100kHz/0.25V	0.52	0.93
MCD-110C-391□	390	K,M	100kHz/0.25V	0.65	0.86
MCD-110C-471□	470	K,M	100kHz/0.25V	0.71	0.78
MCD-110C-561□	560	K,M	100kHz/0.25V	1.00	0.71
MCD-110C-681□	680	K,M	100kHz/0.25V	1.10	0.65
MCD-110C-821□	820	K,M	100kHz/0.25V	1.30	0.59
MCD-110C-102□	1000	K,M	100kHz/0.25V	1.70	0.53

※ 1. □ Specify the inductance tolerance, K(\pm 10%), M(\pm 20%)

※ 2. IDC : Based on inductance change (Δ L/Lo : drop 10% Max.) @ ambient temp. 25°C and
Based on temperature rise (Δ T : 40°C TYP.)



(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 houes, 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 reaovery 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)

