

SCOPE :

This specification applies to the current type Radial Leaded Inductor
for MCD-0810-SERIES

PRODUCT IDENTIFICATION

MCD - 0810 - 102 K

① ② ③ ④

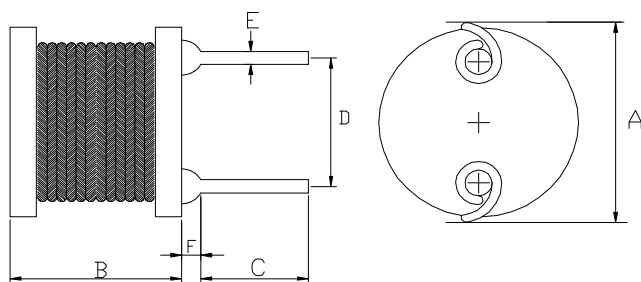
① Product Code

② Dimensions Code

③ Inductance Code

④ Tolerance Code

(1) SHAPES AND DIMENSIONS



A: 10.5 Max.	mm
B: 10.5 Max.	mm
C: 15.0±2.0	mm
D: 5.0±0.5	mm
E: $\phi 0.65 \pm 0.1$	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°C Max.

(3)-2 Operate temperature range -40°C ~ +125°C

(Including self temp. rise)

(3)-3 Storage temperature range -40°C ~ +125°C



MAG.LAYERS

TABLE 1

MAGLAYERS PT/NO.	Inductance L(μH)	Percent Tolerance	Test Frequency	Resistance RDC(Ω)Max.	Rated DC Current	
					IDC1(A)	IDC2(A)
MCD-0810-1R2□	1.2	M	100kHz/0.25V	7.70m	15.0	8.00
MCD-0810-2R2□	2.2	M	100kHz/0.25V	14.0m	12.0	7.00
MCD-0810-3R3□	3.3	M	100kHz/0.25V	16.0m	10.0	6.00
MCD-0810-4R7□	4.7	M	100kHz/0.25V	18.0m	8.00	5.30
MCD-0810-6R8□	6.8	M	100kHz/0.25V	25.0m	5.20	5.00
MCD-0810-100□	10	K,M	100kHz/0.25V	26.0m	5.00	4.50
MCD-0810-150□	15	K,M	100kHz/0.25V	68.0m	4.30	2.70
MCD-0810-180□	18	L,M	100kHz/0.25V	70.0m	4.10	2.70
MCD-0810-220□	22	K,M	100kHz/0.25V	74.0m	3.90	2.60
MCD-0810-270□	27	K,M	100kHz/0.25V	82.5m	3.70	2.50
MCD-0810-330□	33	K,M	100kHz/0.25V	85.0m	3.50	2.40
MCD-0810-101□	100	K,M	100kHz/0.25V	0.26	1.40	1.40
MCD-0810-181□	180	K,M	100kHz/0.25V	0.44	1.00	1.10
MCD-0810-221□	220	K	100kHz/0.25V	0.50	0.90	1.00
MCD-0810-271□	270	K,M	100kHz/0.25V	0.60	0.83	0.90
MCD-0810-331□	330	K,M	100kHz/0.25V	0.78	0.78	0.80
MCD-0810-391□	390	K,M	100kHz/0.25V	0.85	0.70	0.75
MCD-0810-471□	470	K,M	100kHz/0.25V	1.08	0.63	0.70
MCD-0810-561□	560	K,M	100kHz/0.25V	1.19	0.60	0.65
MCD-0810-681□	680	K,M	100kHz/0.25V	1.59	0.55	0.55
MCD-0810-821□	820	K,M	100kHz/0.25V	1.88	0.50	0.50
MCD-0810-102□	1000	K	100kHz/0.25V	2.30	0.45	0.45
MCD-0810-112□	1100	K	100kHz/0.25V	2.60	0.43	0.43
MCD-0810-122□	1200	K	100kHz/0.25V	3.20	0.40	0.40
MCD-0810-152□	1500	K,M	100kHz/0.25V	3.40	0.30	0.37
MCD-0810-222□	2200	K	1kHz/0.25V	3.90	0.27	0.35

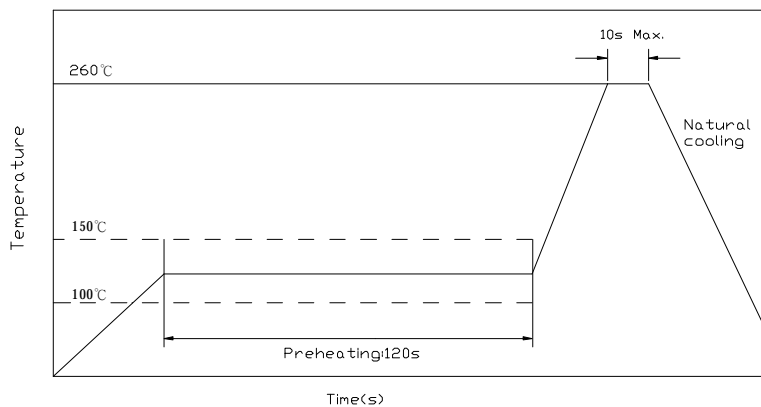
※ 1. □ Specify the inductance tolerance, K(±10%),L(±15%), M(±20%)

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

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

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

FLOW SOLDERING



MAG.LAYERS

(4) RELIABILITY TEST METHOD MECHANICAL

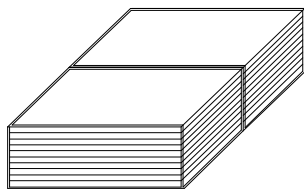
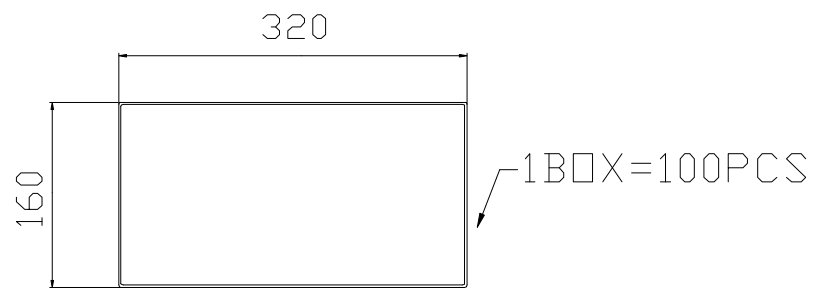
NO.	ITEMS	SPECIFICATIONS	CONDITIONS
1	Solderability test	More than 90% of the terminal electrode should be covered with solder.	Dipping: $245 \pm 5^{\circ}\text{C}$, 3 ± 1 seconds
2	lead tensile strength test	1.0 Kg MIN.	The lead of product is pulled with a load of 1.0kg minimum until lead breakdown. 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

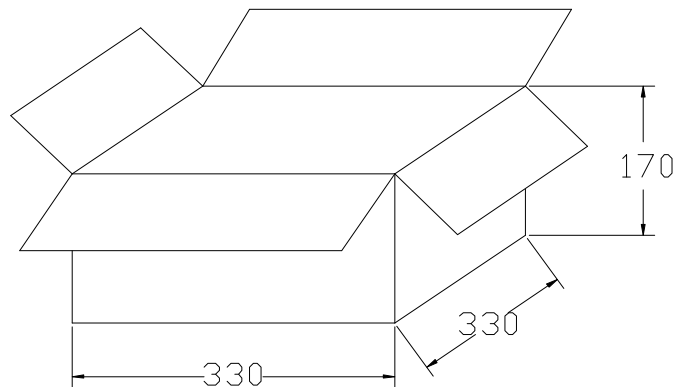
NO.	ITEMS	SPECIFICATIONS	CONDITIONS
1	Humidity endurance test	$\Delta L/L \leq \pm 5\%$	The product is placed in a chamber of $40 \pm 2^{\circ}\text{C}$, 90~95%RH for 96 hours. Measurement is done after the recovery of 4~24 hours.
2	High temp endurance test	$\Delta L/L \leq \pm 5\%$	The product is placed 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 be 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)



INNER BOX *20 (2,000 PCS)



OUT BOX (2,000 PCS)

