

SCOPE :

This specification applies to the current type Radial Leaded Inductor
for MCD-875C-SERIES

PRODUCT IDENTIFICATION

MCD - 875C - 220 M

① ② ③ ④

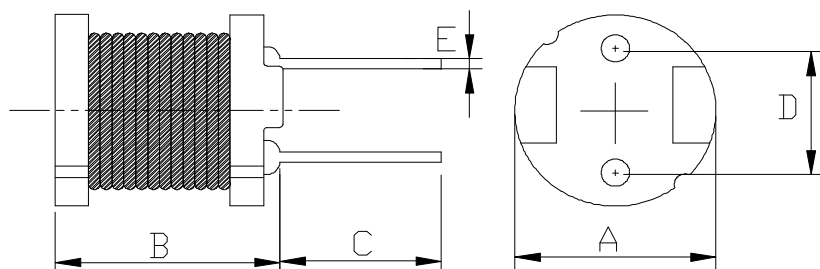
① Product Code

② Dimensions Code

③ Inductance Code

④ Tolerance Code

(1) SHAPES AND DIMENSIONS



A: 7.8 ± 0.5	mm
B: 8.0 Max.	mm
C: 15 ± 2.0	mm
D: 5.0 ± 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	
					IDC1(A)	IDC2(A)
MCD-875C-3R3□	3.3	L,M	100kHz/0.25V	14m	6.20	6.40
MCD-875C-100□	10	M	100kHz/0.25V	50m	2.90	3.70
MCD-875C-150□	15	K,M	100kHz/0.25V	70m	2.20	3.10
MCD-875C-220□	22	K,M	100kHz/0.25V	90m	1.80	2.45
MCD-875C-470□	47	K,M	100kHz/0.25V	0.15	1.30	1.80
MCD-875C-820□	82	K,M	100kHz/0.25V	0.24	1.00	1.35
MCD-875C-101□	100	K,M	100kHz/0.25V	0.28	0.89	1.20
MCD-875C-182□	1800	K,M	1kHz/0.25V	5.05	0.20	0.30

※ □ specify the inductance tolerance, K($\pm 10\%$), L($\pm 15\%$), M($\pm 20\%$)

IDC1 : Based on inductance change ($\Delta L/L_o$: 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)

