

SCOPE :

This specification applies to the high current type Axial Leaded Inductor  
for MCD-0608-SERIES

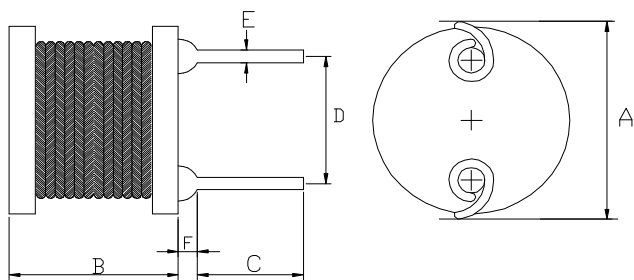
PRODUCT IDENTIFICATION

MCD - 0608 - 330 M

①      ②      ③      ④

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

(1) SHAPES AND DIMENSIONS



- A: 7.8 Max.      mm
- B: 8.5 Max.      mm
- C: 15±2.0      mm
- D: 3.0±0.5      mm
- E: φ0.65±0.1      mm
- F: 2.0 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

**TABLE 1**

MAGLAYERS PT/NO.	Inductance L(μH)	Percent Tolerance	Test Frequency	Resistance RDC(Ω)Max.	Rated DC Current	
					IDC1(A)	IDC2(A)
MCD-0608-2R2□	2.2	M	100kHz/0.25V	16m	7.00	6.00
MCD-0608-3R3□	3.3	M	100kHz/0.25V	19m	5.50	5.00
MCD-0608-4R7□	4.7	M	100kHz/0.25V	23m	4.00	4.20
MCD-0608-100□	10	K,M	100kHz/0.25V	0.13	2.40	3.00
MCD-0608-150□	15	K,M	100kHz/0.25V	0.19	1.30	2.70
MCD-0608-220□	22	K,M	100kHz/0.25V	0.30	1.15	2.00
MCD-0608-270□	27	K,M	100kHz/0.25V	0.40	1.10	1.80
MCD-0608-330□	33	K,M	100kHz/0.25V	0.55	1.05	1.75
MCD-0608-390□	39	K,M	100kHz/0.25V	0.59	1.00	1.50
MCD-0608-470□	47	K,M	100kHz/0.25V	0.61	0.95	1.20
MCD-0608-500□	50	K,M	100kHz/0.25V	0.62	0.93	1.10
MCD-0608-680□	68	K,M	100kHz/0.25V	0.65	0.83	1.00
MCD-0608-101□	100	K,M	100kHz/0.25V	0.74	0.70	0.95
MCD-0608-221□	220	K,M	100kHz/0.25V	0.89	0.49	0.60
MCD-0608-391□	390	K,M	100kHz/0.25V	1.32	0.37	0.50
MCD-0608-471□	470	K,M	100kHz/0.25V	1.45	0.32	0.40
MCD-0608-561□	560	K,M	100kHz/0.25V	2.0	0.29	0.40
MCD-0608-821□	820	K,M	100kHz/0.25V	3.0	0.22	0.35
MCD-0608-152□	1500	J,K	10kHz/0.25V	4.5	0.18	0.27

※ □ specify the inductance tolerance, J(±5%), K(±10%), M(±20%)

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

IDC2 : Based on temperature rise ( $\Delta T$  : 40℃ 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: $245 \pm 5^{\circ}\text{C}$ , $3 \pm 1$ 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 $10 \pm 1$ 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)

