

SCOPE :

This specification applies to the current type Radial Leaded Inductor
for MCD-0912S-SERIES

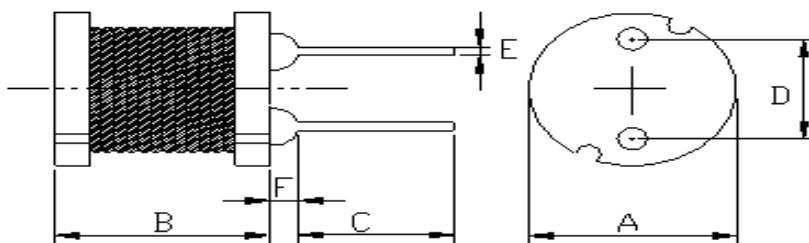
PRODUCT IDENTIFICATION

MCD - 0912S - 102 K

① ② ③ ④

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

(1) SHAPES AND DIMENSIONS



A: 11.0 Max.	mm
B: 12.5 Max.	mm
C: 15.0±2.0	mm
D: 5.0±0.5	mm
E: $\varnothing 0.8 \pm 0.1$	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 MILLIOHM METER (or equivalent)

(3) CHARACTERISTICS

(3)-1 Operate temperature range $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

(Including self temp. rise)

(3)-2 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	
					Isat(A)	Irms(A)
MCD-0912S-2R2□	2.2	K,M	100kHz/0.25V	9.5m	7.00	6.80
MCD-0912S-100□	10	K,M	100kHz/0.25V	28m	6.50	4.80
MCD-0912S-220□	22	K,M	100kHz/0.25V	50m	4.50	3.50
MCD-0912S-330□	33	K,M	100kHz/0.25V	71m	3.80	3.10
MCD-0912S-470□	47	K,M	100kHz/0.25V	78m	2.80	2.50
MCD-0912S-680□	68	K,M	100kHz/0.25V	0.13	2.50	2.00
MCD-0912S-101□	100	K,M	100kHz/0.25V	0.16	1.70	1.80
MCD-0912S-121□	120	K,M	100kHz/0.25V	0.20	1.50	1.70
MCD-0912S-151□	150	K,M	100kHz/0.25V	0.24	1.40	1.60
MCD-0912S-181□	180	K,M	100kHz/0.25V	0.31	1.30	1.40
MCD-0912S-221□	220	K,M	100kHz/0.25V	0.34	1.10	1.15
MCD-0912S-271□	270	K,M	100kHz/0.25V	0.40	1.00	1.12
MCD-0912S-301□	300	K,M	100kHz/0.25V	0.46	0.96	1.10
MCD-0912S-331□	330	K,M	100kHz/0.25V	0.52	0.93	1.00
MCD-0912S-391□	390	K,M	100kHz/0.25V	0.65	0.86	0.90
MCD-0912S-471□	470	K,M	100kHz/0.25V	0.71	0.78	0.80
MCD-0912S-501□	500	K,M	100kHz/0.25V	0.80	0.75	0.78
MCD-0912S-561□	560	K,M	100kHz/0.25V	1.00	0.70	0.75
MCD-0912S-681□	680	K,M	100kHz/0.25V	1.10	0.65	0.70
MCD-0912S-721□	720	K,M	100kHz/0.25V	1.20	0.63	0.67
MCD-0912S-821□	820	K,M	100kHz/0.25V	1.30	0.59	0.65

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

※ 2. Isat : Based on inductance change (Δ L/Lo: drop 10%Max.) @ ambient temp. 25°C

Irms : Based on temperature rise (Δ T : 40°C TYP.)

Rated DC Current : The less value which is Isat or Irms.

TABLE 1

MAGLAYERS PT/NO.	Inductance L(μ H)	Percent Tolerance	Test Frequency	Resistance RDC(Ω)Max.	Rated DC Current	
					Isat(A)	Irms(A)
MCD-0912S-102□	1000	K,M	100kHz/0.25V	1.70	0.53	0.60
MCD-0912S-122□	1200	K,M	10kHz/0.25V	2.10	0.51	0.54
MCD-0912S-152□	1500	K,M	10kHz/0.25V	2.64	0.49	0.46
MCD-0912S-182□	1800	K,M	10kHz/0.25V	3.00	0.47	0.43
MCD-0912S-202□	2000	K,M	10kHz/0.25V	3.30	0.45	0.41
MCD-0912S-222□	2200	K,M	10kHz/0.25V	3.40	0.44	0.40
MCD-0912S-302□	3000	K,M	10kHz/0.25V	4.70	0.40	0.35
MCD-0912S-322□	3200	K,M	10kHz/0.25V	4.90	0.40	0.33
MCD-0912S-352□	3500	K,M	10kHz/0.25V	5.30	0.37	0.32
MCD-0912S-382□	3800	K,M	10kHz/0.25V	5.60	0.35	0.31
MCD-0912S-402□	4000	K,M	10kHz/0.25V	5.70	0.35	0.30
MCD-0912S-472□	4700	K,M	10kHz/0.25V	6.20	0.32	0.27
MCD-0912S-502□	5000	K,M	10kHz/0.25V	6.60	0.30	0.26
MCD-0912S-562□	5600	K,M	10kHz/0.25V	7.30	0.25	0.24
MCD-0912S-602□	6000	K,M	10kHz/0.25V	7.50	0.22	0.22
MCD-0912S-682□	6800	K,M	10kHz/0.25V	7.70	0.17	0.20
MCD-0912S-842□	8400	K,M	10kHz/0.25V	13.60	0.14	0.17

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

※ 2. Isat : Based on inductance change (Δ L/Lo: drop 10%Max.) @ ambient temp. 25°C

Irms : Based on temperature rise (Δ T : 40°C TYP.)

Rated DC Current : The less value which is Isat or Irms.

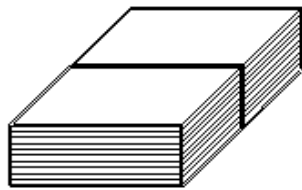
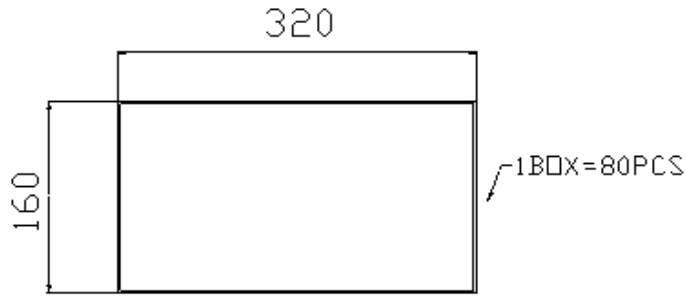
(4) RELIABILITY TEST METHOD MECHANICAL

NO.	ITEMS	SPECIFICATIONS	CONDITIONS
1	Solderability test	More than 90% of the terminal electrode should be covered with solder.	Dipping: 245 ± 5 °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±5°C for a duration of 10±1sec. Nothing particular on visual and open circuitry as a result of ore testing.

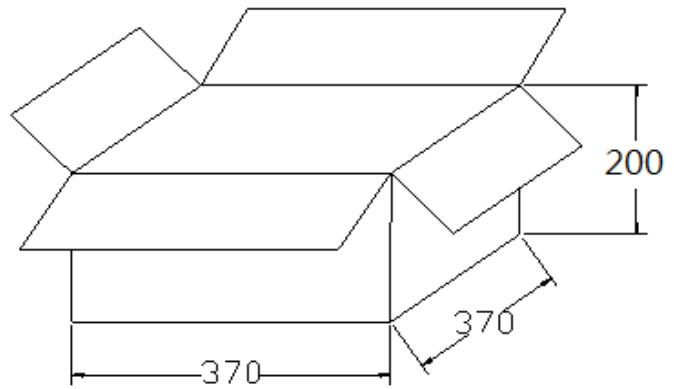
ENVIRONMENTAL

NO.	ITEMS	SPECIFICATIONS	CONDITIONS
1	Humidity endurance test	$\Delta L/L \leq \pm 5\%$	The product is placed in a chamber of 40±2°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 125±2°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±2°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 -40±2°C for one hour. The temp will raised to +125±2°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.

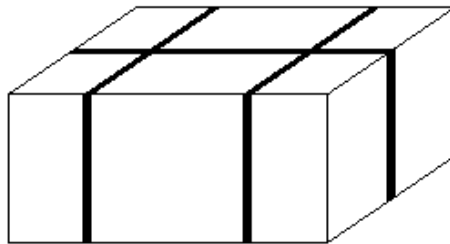
(5) PACKAGE SPECIFICATION (mm)



INNER BOX *20<1,600 PCS>



OUT BOX (1,600 PCS)



Please note that the contents may change without any prior notice due to reasons such as upgrading.

