

## SCOPE :

This specification applies to the current type Radial Leaded Inductor  
for MCD-1012S-SERIES(U)

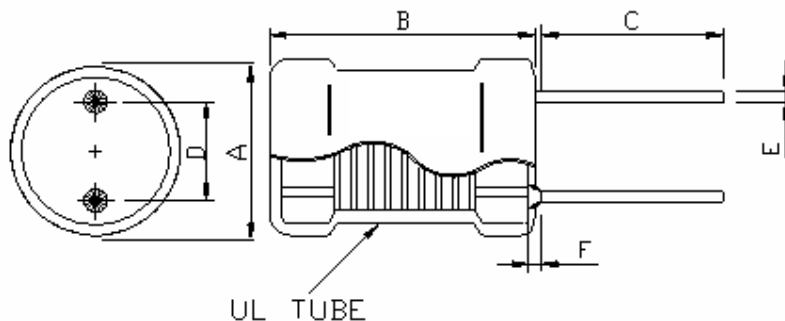
## PRODUCT IDENTIFICATION

MCD - 1012S - 101 J U

① ② ③ ④⑤

- ① Product Code
- ② Dimensions Code
- ③ Inductance Code
- ④ Tolerance Code
- ⑤ UL Tube

## (1) SHAPES AND DIMENSIONS



A:	13.0 Max.	mm
B:	14.5 Max.	mm
C:	15.0±2.0	mm
D:	5.0±0.5	mm
E:	φ0.8±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 Operate temperature range ..... -40°C ~ +125°C

(Including self temp. rise)

(3)-2 Storage temperature range ..... -40°C ~ +105°C



MAG.LAYERS

**TABLE 1**

MAGLAYERS PT/NO.	Inductance L( $\mu$ H)	Percent Tolerance	Test Frequency	Resistance RDC( $\Omega$ )Max.	Rated DC Current	
					Isat(A)	Irms(A)
MCD-1012S-1R4□U	1.4	M	100kHz/0.25V	4.8m	17.0	9.30
MCD-1012S-2R0□U	2.0	M	100kHz/0.25V	7.8m	16.0	8.60
MCD-1012S-2R2□U	2.2	M	100kHz/0.25V	8.7m	16.0	8.30
MCD-1012S-2R5□U	2.5	M	100kHz/0.25V	9.7m	15.0	8.00
MCD-1012S-3R3□U	3.3	M	100kHz/0.25V	10.4m	13.0	7.00
MCD-1012S-3R5□U	3.5	M	100kHz/0.25V	10.4m	13.0	7.00
MCD-1012S-3R6□U	3.6	M	100kHz/0.25V	10.4m	13.0	7.00
MCD-1012S-3R9□U	3.9	M	100kHz/0.25V	12.1m	11.0	6.70
MCD-1012S-4R0□U	4.0	M	100kHz/0.25V	12.1m	11.0	6.70
MCD-1012S-4R7□U	4.7	M	100kHz/0.25V	15.0m	9.0	6.40
MCD-1012S-6R8□U	6.8	M	100kHz/0.25V	15.7m	8.5	6.00
MCD-1012S-8R5□U	8.5	M	100kHz/0.25V	18.0m	8.0	5.70
MCD-1012S-100□U	10	K,M	100kHz/0.25V	21.0m	7.0	5.50
MCD-1012S-150□U	15	K,M	100kHz/0.25V	31.2m	5.0	4.20
MCD-1012S-180□U	18	K,M	100kHz/0.25V	38.2m	4.8	4.00
MCD-1012S-220□U	22	K,M	100kHz/0.25V	44.1m	4.5	3.80
MCD-1012S-330□U	33	K,M	100kHz/0.25V	66.5m	3.5	3.10
MCD-1012S-101□U	100	J,K	100KHz/0.25V	0.15	2.2	2.00
MCD-1012S-151□U	150	K,M	100KHz/0.25V	0.21	1.9	1.80
MCD-1012S-221□U	220	K,M	100KHz/0.25V	0.35	1.7	1.40
MCD-1012S-331□U	330	K,M	100KHz/0.25V	0.52	1.4	1.20
MCD-1012S-391□U	390	K,M	100KHz/0.25V	0.67	1.3	1.00
MCD-1012S-471□U	470	K,M	100KHz/0.25V	0.70	1.0	0.80
MCD-1012S-561□U	560	K,M	100KHz/0.25V	0.89	0.90	0.75
MCD-1012S-681□U	680	K,M	100KHz/0.25V	0.96	0.80	0.70
MCD-1012S-821□U	820	K,M	100KHz/0.25V	1.20	0.75	0.65
MCD-1012S-102□U	1000	K,M	100KHz/0.25V	1.50	0.65	0.60
MCD-1012S-122□U	1200	K,M	10KHz/0.25V	1.70	0.64	0.58
MCD-1012S-152□U	1500	K,M	10KHz/0.25V	2.05	0.62	0.55
MCD-1012S-172□U	1700	K,M	10KHz/0.25V	2.38	0.60	0.50
MCD-1012S-182□U	1800	K,M	10KHz/0.25V	2.38	0.60	0.50
MCD-1012S-202□U	2000	K,M	10KHz/0.25V	2.60	0.58	0.48
MCD-1012S-272□U	2700	K,M	10KHz/0.25V	3.62	0.50	0.45
MCD-1012S-472□U	4700	K,M	10KHz/0.25V	6.40	0.32	0.31

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

※ Isat : Based on inductance change ( $\Delta$ L/Lo : drop 10% Max.) @ambient temperature 25°C

Irms : Based on temperature rise ( $\Delta$ T : 40°C TYP.)

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



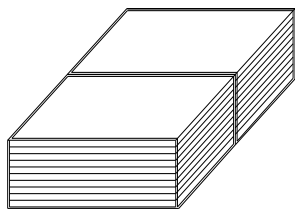
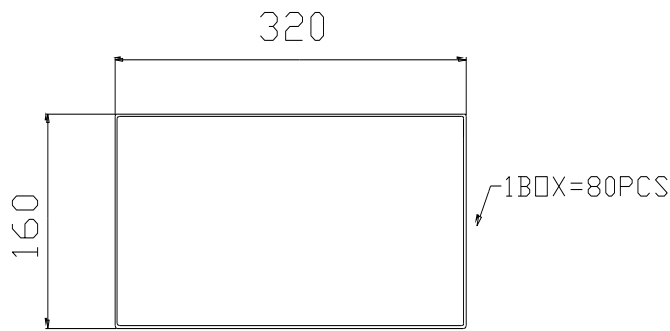
#### (4) RELIABILITY TEST METHOD MECHANICAL

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.

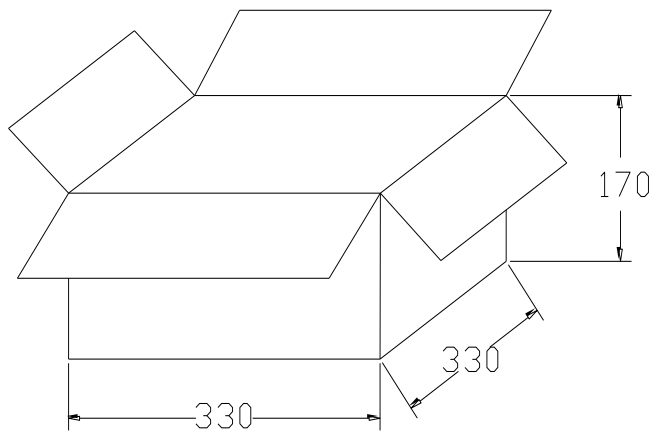
#### ENVIRONMENTAL

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.

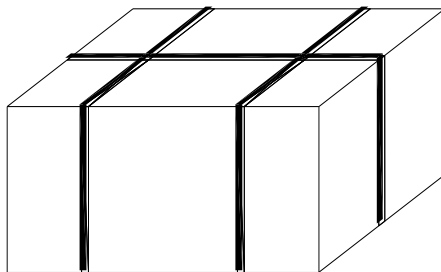
**(5) PACKAGE SPECIFICATION (mm)**



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.

