

SCOPE :

This specification applies to the high current type Axial Leaded Inductor
for MCD-1618-SERIES

PRODUCT IDENTIFICATION

MDC- 1618 - 271 K-RU

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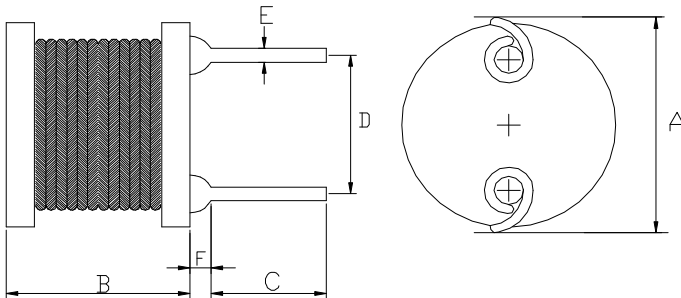
MDCI- Product Code

MDCII- Dimensions Code

MDCIII- Inductance Code

MDCIV- Tolerance Code

(1) SHAPES AND DIMENSIONS



A: 19.0 Max.	mm
B: 18.5 Max.	mm
C: 15.0±2.0	mm
D: 10.0±1.0	mm
E: $\varnothing 1.0 \pm 0.1$	mm
F: 3.0 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



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-1618-220□-RU	22	M	100kHz/0.25V	31 m	14.0	5.5
MCD-1618-270□-RU	27	M	100kHz/0.25V	35 m	13.5	5.4
MCD-1618-330□-RU	33	M	100kHz/0.25V	37 m	13.0	5.3
MCD-1618-390□-RU	39	M	100kHz/0.25V	52 m	12.5	5.0
MCD-1618-470□-RU	47	M	100kHz/0.25V	56 m	11.5	4.8
MCD-1618-560□-RU	56	M	100kHz/0.25V	58 m	11.0	4.6
MCD-1618-680□-RU	68	M	100kHz/0.25V	62 m	9.2	4.4
MCD-1618-820□-RU	82	M	100kHz/0.25V	76 m	8.7	4.3
MCD-1618-101□-RU	100	K,M	100kHz/0.25V	0.108	7.7	4.0
MCD-1618-121□-RU	120	K,M	100kHz/0.25V	0.132	7.0	3.8
MCD-1618-151□-RU	150	K,M	100kHz/0.25V	0.152	6.5	3.6
MCD-1618-181□-RU	180	K,M	100kHz/0.25V	0.163	6.0	3.4
MCD-1618-221□-RU	220	K,M	100kHz/0.25V	0.216	5.5	2.8
MCD-1618-271□-RU	270	K,M	100kHz/0.25V	0.253	5.0	2.7
MCD-1618-331□-RU	330	K,M	100kHz/0.25V	0.270	4.4	2.6
MCD-1618-391□-RU	390	K,M	100kHz/0.25V	0.341	3.9	2.1
MCD-1618-471□-RU	470	K,M	100kHz/0.25V	0.390	3.6	1.9
MCD-1618-561□-RU	560	K,M	100kHz/0.25V	0.425	3.3	1.8
MCD-1618-681□-RU	680	K,M	100kHz/0.25V	0.565	2.9	1.6
MCD-1618-821□-RU	820	K,M	100kHz/0.25V	0.700	2.7	1.4
MCD-1618-102□-RU	1000	K,M	100kHz/0.25V	0.881	2.5	1.2

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

※ IDC1 : Based on inductance change (Δ L/Lo : \leq drop 10% Max.) @ ambient temp. 25°C

IDC2 : Based on temperature rise (Δ T : 40°C Typ.)

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

(4) RELIABILITY TEST METHOD MECHANICAL

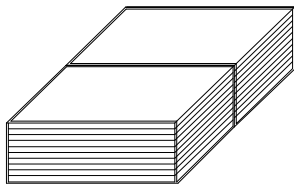
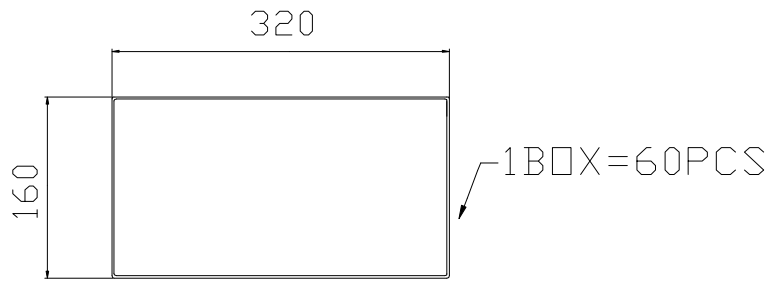
NO.	ITEMS	SPECIFICATIONS	CONDITIONS
1	Solderability test	More than 90% of the terminal electrode should be covered with solder.	Dipping: 245 ± 5 °C, 3 ± 1 seconds
2	lead tensile strength test	1.0 Kg MIN.	The lead of product is pulled with a load of 1.0kg minimum until lead breakdown. The tensile force 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 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±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 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±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 -20±2°C for one hour. The temp will be raised to +80±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 *14(840 PCS)

