SCOPE :

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

PRODUCT INDENTIFICATION

MDC- 1618 - 271 K

① ② ③ ④

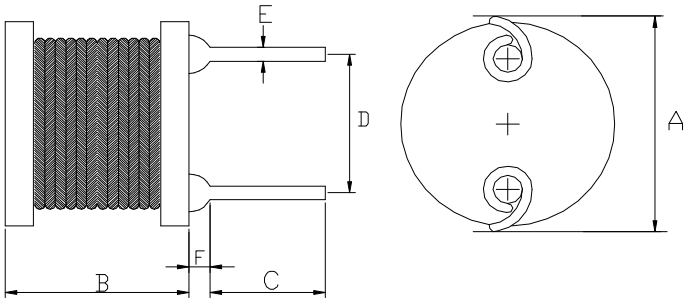
① Product Code

② Dimensions Code

③ Inductance Code

④ 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:	**φ1.0±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℃ Max.

(3)-2 Operate temperature range ..... －40℃～＋125℃

(Including self temp. rise)

(3)-3 Storage temperature range ..... －40℃～＋125℃

TABLE 1

MAGLAYERS PT/NO.	Inductance L(μH)	Percent Tolerance	Test Frequency	Resistance RDC(Ω)Max.	Rated DC Current	
					IDC1(A)	IDC2(A)
MCD-1618-220□	22	M	100kHz/0.25V	31 m	14.0	5.5
MCD-1618-270□	27	M	100kHz/0.25V	35 m	13.5	5.4
MCD-1618-330□	33	M	100kHz/0.25V	37 m	13.0	5.3
MCD-1618-390□	39	M	100kHz/0.25V	52 m	12.5	5.0
MCD-1618-470□	47	M	100kHz/0.25V	56 m	11.5	4.8
MCD-1618-560□	56	M	100kHz/0.25V	58 m	11.0	4.6
MCD-1618-680□	68	M	100kHz/0.25V	62 m	9.2	4.4
MCD-1618-820□	82	M	100kHz/0.25V	76 m	8.7	4.3
MCD-1618-101□	100	K,M	100kHz/0.25V	0.108	7.7	4.0
MCD-1618-121□	120	K,M	100kHz/0.25V	0.132	7.0	3.8
MCD-1618-151□	150	K,M	100kHz/0.25V	0.152	6.5	3.6
MCD-1618-181□	180	K,M	100kHz/0.25V	0.163	6.0	3.4
MCD-1618-221□	220	K,M	100kHz/0.25V	0.216	5.5	2.8
MCD-1618-271□	270	K,M	100kHz/0.25V	0.253	5.0	2.7
MCD-1618-331□	330	K,M	100kHz/0.25V	0.270	4.4	2.6
MCD-1618-391□	390	K,M	100kHz/0.25V	0.341	3.9	2.1
MCD-1618-471□	470	K,M	100kHz/0.25V	0.390	3.6	1.9
MCD-1618-561□	560	K,M	100kHz/0.25V	0.425	3.3	1.8
MCD-1618-681□	680	K,M	100kHz/0.25V	0.565	2.9	1.6
MCD-1618-821□	820	K,M	100kHz/0.25V	0.700	2.7	1.4
MCD-1618-102□	1000	K,M	100kHz/0.25V	0.881	2.5	1.2

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

※ IDC1： Based on inductance change （△L/Lo： ≦ drop 10% Max.) @ ambient temp. 25℃

IDC2： Based on temperature rise （△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 termnial electrode should be covered with solder.	Dipping: 245 ± 5 ℃, 3 ± 1 seconds
2	lead tensile strength test	1.0 Kg MIN.	The lead of product is pulled with a load of 1.0kg mininum until lead breakdown. The tensile force shall be recorded.
3	Vibration test	△L/L≦±7% Visual:OK	The product is fixed ento the vibration with amplitude of 1.52m/m at a frequency of 10～55Hz sweeping for lmin. 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℃ 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	△L/L≦±5%	The product is placed in a chamber of 40±2℃, 90～95%RH for 96 hours. Measurement is done after the reaovery of 4～24 hours.
2	High temp endurance test	△L/L≦±5%	The product is placed in a chamber of 80±2℃, for 72 hours. Measurement is done after recovery of 4～24 hours.
3	Low temp test	△L/L≦±5%	The product is placed in a chamber of -40±2℃, for 96 hours. Measurement is done after recovery of 4～24 hours.
4	Thermal shock test	△L/L≦±5%	The specimens are placed in a chamber and the temp is then lowered to -20±2℃ for one hour. The temp will raised to +80±2℃ for one hour. This constitues 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)