SCOPE：

This specification applies to the Pb Free high current type SMD Common mode filter

for MCM-0905BH1-SERIES-□-□□

PRODUCT INDENTIFICATION

MCM - 0905B H1 - 901 - F - □□

① ② ③ ④ ⑤

① Product Code

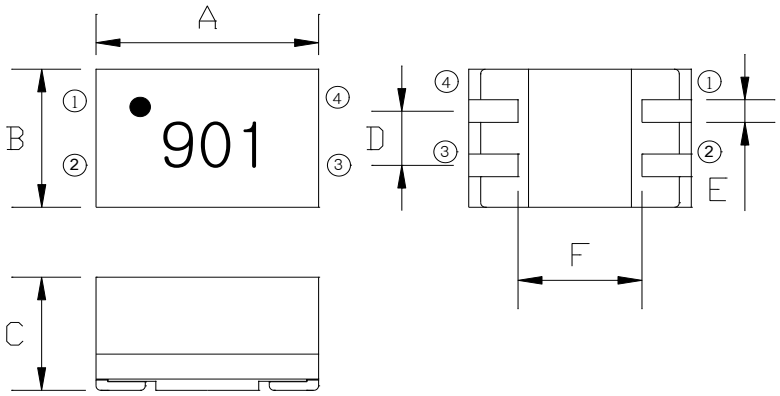
② Dimensions Code

③ AEC-Q200 Code

④ Impedance Code

⑤ Inner Control Code

(1) SHAPES AND DIMENSIONS



A:	**9.2±0.3**	**mm**
B:	**6.0±0.3**	**mm**
C:	**5.0±0.3**	**mm**
D:	**2.54±0.2**	**mm**
E:	**1.0 Typ.**	**mm**
F:	**5.7 Ref.**	**mm**

(2) ELECTRICAL SPECIFICATIONS

SEE TABLE 1

TEST INSTRUMENTS

Z : HP 4285A PRECISION LCR METER (or equivalent)

RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

I.R : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)

(3) CHARACTERISTICS

(3)-1 Operate temperature range ..... －40℃～＋125℃

(Including self temp. rise)

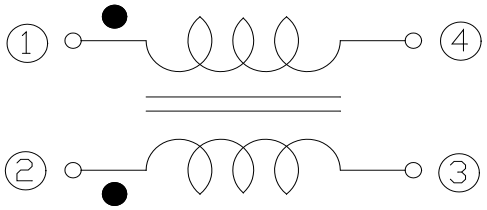
(3)-2 Storage temperature range ..... －40℃～＋125℃

TABLE 1

MAGLAYERS PT/NO.	Impedance(Ω) at 100MHz		Resistance RDC (Ω) Max. (1 line)	Rated Current (A) Max.	Insulation Resistance (MΩ) Min.	Rated Voltage (V) Max.	Marking
	Min.	Typ.					
MCM-0905BH1-901-F-□□	200	900	70m	1.6	100	80	●901

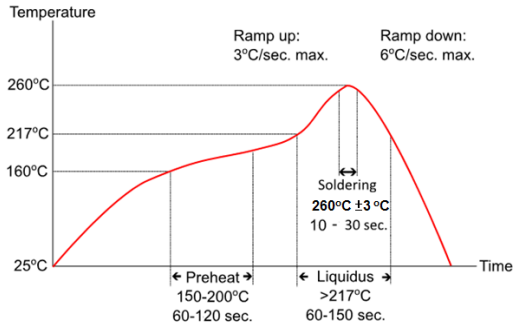
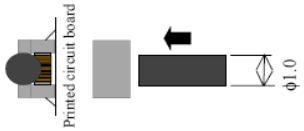
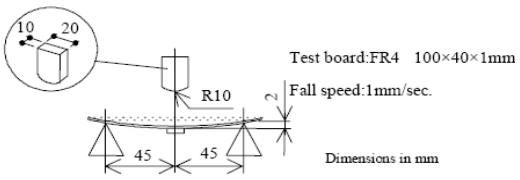
Rated Current：Based on temperature rise (△T：40℃ Typ.)

CIRCUIT DIAGRAM



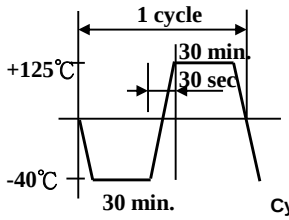
(4) RELIABILITY TEST METHOD

MECHANICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Solder ability	The product shall be connected to the test circuit board by the fillet (the height is 0.2mm).	Apply cream solder to the printed circuit board . Refer to clause 8 for Reflow profile.
Resistance to Soldering heat (reflow soldering)	There shall be no damage or problems.	Temperature profile of reflow soldering  Ramp up rate: 3°C per second (max.) Ramp down rate: 6°C per second (max.) Preheat temperature: 150-200°C, 60-120 seconds Liquidus temperature: above 217°C, 60-150 seconds Peak temperature: 260oC ±3 oC, 10-30 seconds
Terminal strength	The terminal electrode and the ferrite must not damaged.	Solder a chip to test substrate , and then laterally apply a load 9.8N in the arrow direction. 
Strength on PC board bending	The terminal electrode and the ferrite must not damaged.	Solder a chip to test substrate and then apply a load. 
High temperature resistance	Inductance:Within±20% of the initial value. Insulation resistance and DC resistance on the specification(refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not damaged.	After the samples shall be soldered onto the test circuit board,the test shall be done. Measurement : After placing for 24 hours min. Temperature : +125±2℃ Applied voltage : Rated voltage Applied current : Rated current Testing time : 500±12 hours
MSL	No apparent damage Fulfill the electrical spec. after test.	85℃、85%RH FOR 168 HOURS

(4) RELIABILITY TEST METHOD

MECHANICAL

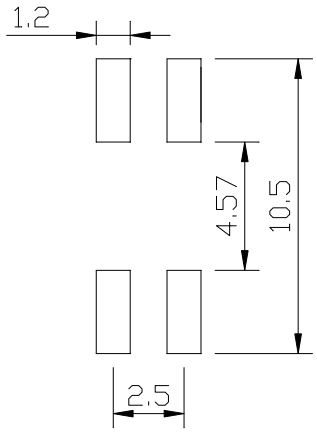
TEST ITEM	SPECIFICATION	TEST DETAILS
Humidity resistance	Impedance:Within±20% of the initial value. Insulation resistance and DC resistance on the specification(refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not damaged.	After the samples shall be soldered onto the test circuit board,the test shall be done. Measurement : After placing for 24 hours min. Temperature : +60±2℃ , Humidity : 90 to 95 %RH Applied voltage : Rated voltage Applied current : Rated current Testing time : 500±12 hours
Thermal shock	Impedance:Within±20% of the initial value. Insulation resistance and DC resistance on the specification(refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not damaged.	 Cycle Time：100
Low temperature storage	Impedance:Within±20% of the initial value. Insulation resistance and DC resistance on the specification(refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not damaged.	After the samples shall be soldered onto the test circuit board,the test shall be done. Measurement : After placing for 24 hours min. Temperature : -40±2℃ Testing time : 500±12 hours
Vibration	Impedance:Within±20% of the initial value. Insulation resistance and DC resistance on the specification(refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not damaged.	After the samples shall be soldered onto the test circuit board,the test shall be done. Frequency : 10 to 55 Hz Amplitude : 1.52 mm Dimension and times : X ,Y and Z directions for 2 hours each.
Solderability	New solder More than 75%	Flux (rosin, isopropyl alcohol{JIS-K-1522}) shall be coated over the whole of the sample before hard, the sample shall then be preheated for about 2 minutes in a temperature of 130～150℃ and after it has been immersed to a depth 0.5mm below for 3±0.2 seconds fully in molten solder M705 with a temperature of 245±2℃. More than 75% of the electrode sections shall be couered with new solder smoothly when the sample is taken out of the solder bath.
High Temp with Load Test	After relibility test △L within ±25%	1000hrs.at rated operating temperature (e.g. 155°C part can be stored for 1000hrs.@ 155°C.Same applies for 125°C and 105°C. Unpowered. Measurement at 24±4 hours after test conclusion.

(5) LAND DIMENSION (Ref.)

PCB: GLASS EPOXY t=1.6mm

(5)-1 LAND PATTERN DIMENSIONS

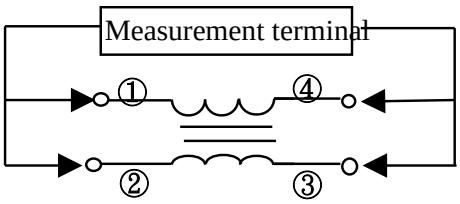
(STANDARD PATTERN)



(6) TEST EQUIPMENT

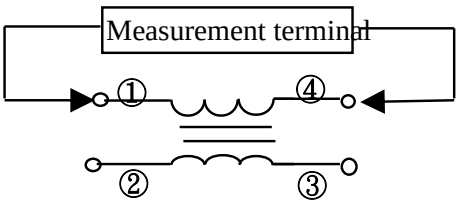
(6)-1 Impedance

Measured by using HP4291B RF Impedance Analyzer.



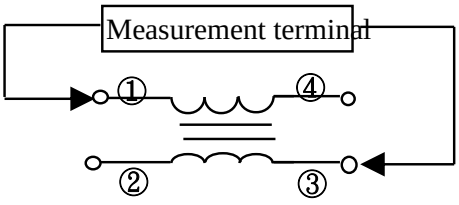
(6)-2 DC Resistance

Measured by using Chroma 16502 milliohm meter.



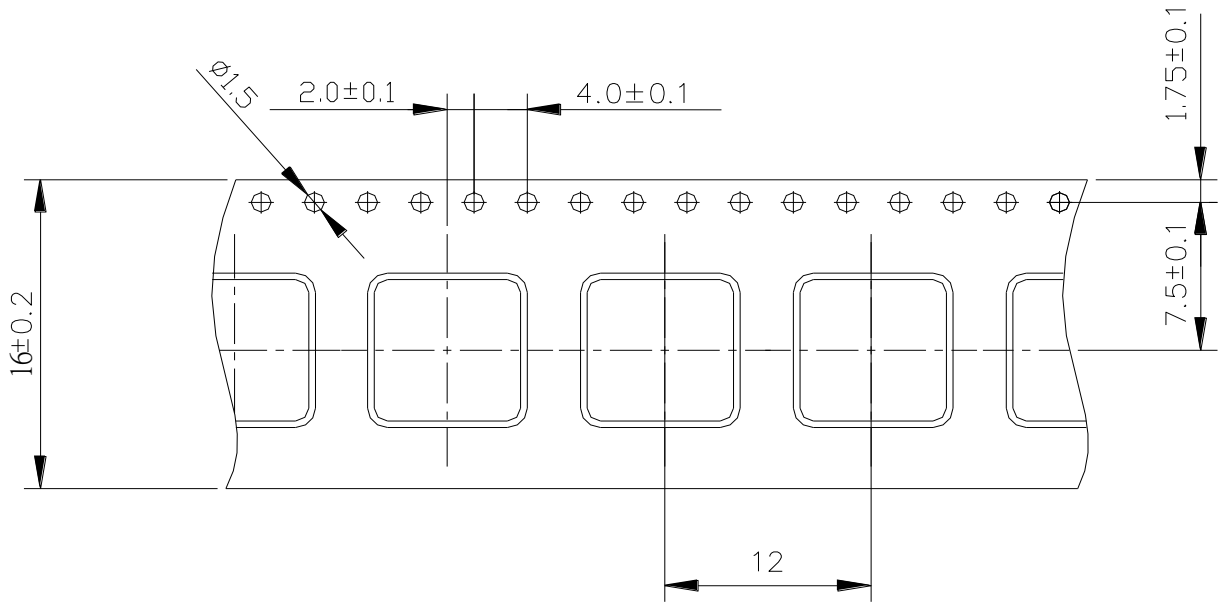
(6)-3 Insulation Resistance

Measured by using Chroma 19073

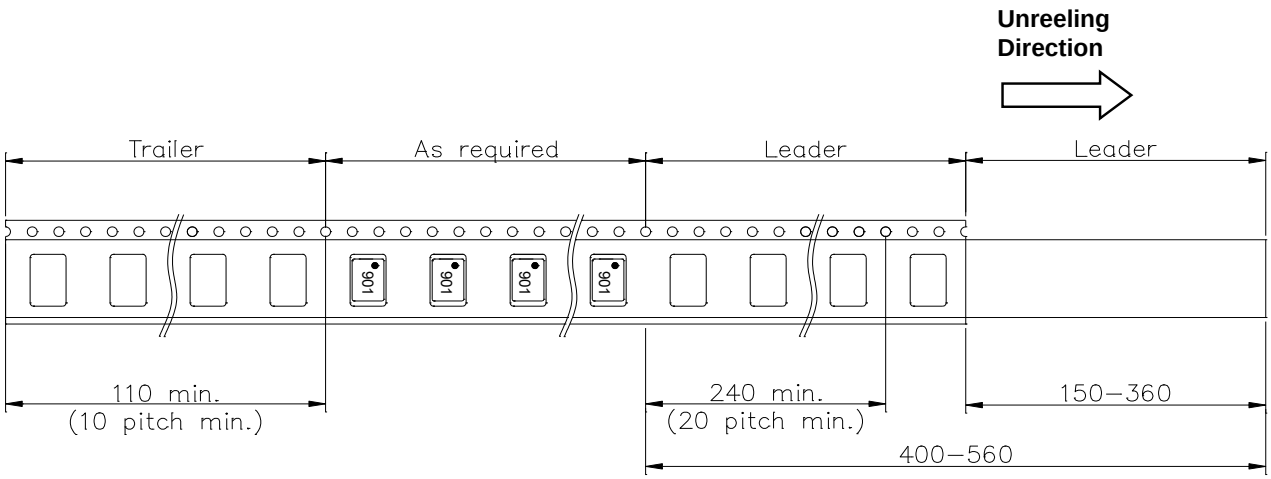


(6) PACKAGING

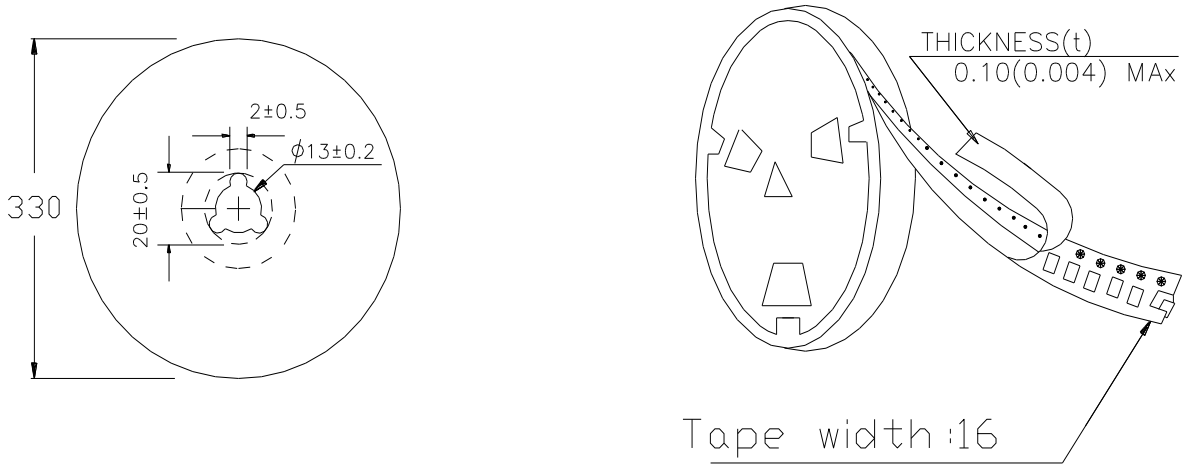
(6)-1 CARRIER TAPE DIMENSIONS (mm)



(6)-2 TAPING DIMENSIONS (mm)



(6)-3 REEL DIMENSIONS (mm)

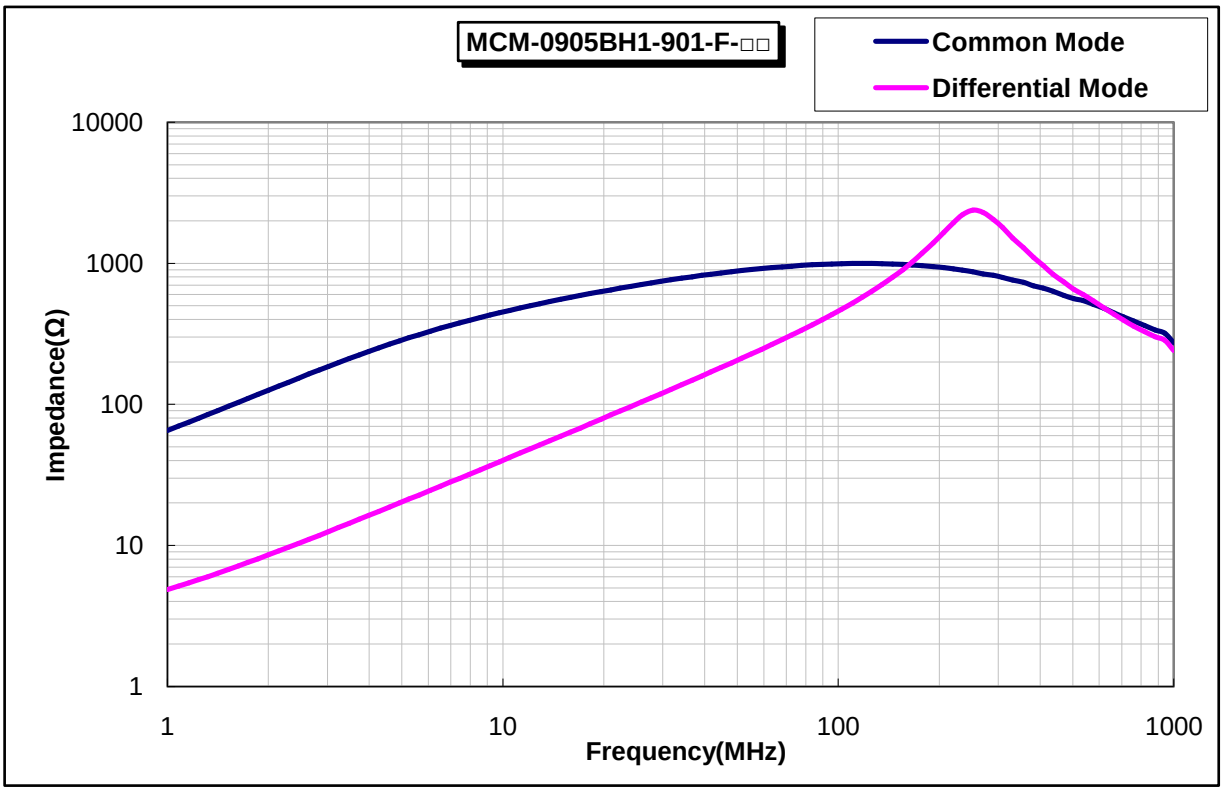


(6)-4 QUANTITY

800 pcs/Reel

The products are packaged so that no damage will be sustained.

TYPICAL ELECTRICAL CHARACTERISTICS



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