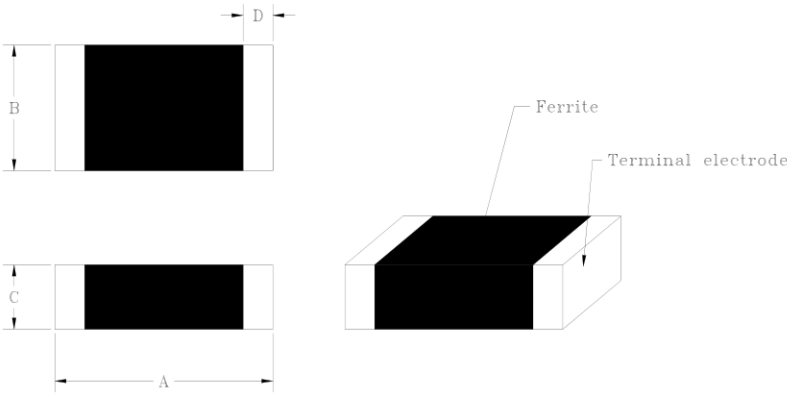


SPECIFICATION FOR APPROVAL

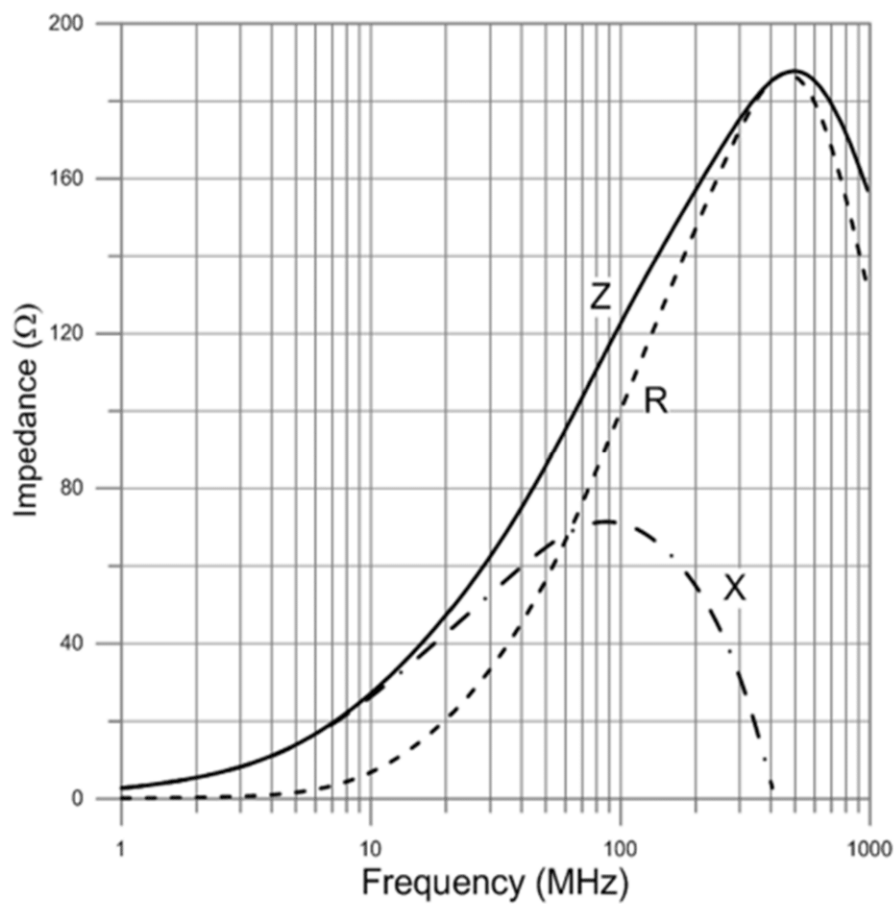
COMMODITY	CHIP BEAD	SPEC NO.	
ITEM	MFE16X08X08A-121.2.5	Green	

(1) DIMENSION: (UNIT: mm)		DIM.	TOL.
	A	1.6	±0.2
	B	0.8	±0.2
	C	0.8	±0.2
	D	0.3	±0.2

(2) ELECTRICAL CHARACTERISTIC			TEST INSTRUMENTS.
IMPEDANCE	120 ± 25%	Ω	☒ AGILENT 4294A Precision Impedance Analyzer. ☐ AGILENT 4285A Precision L.C.R. Meter. ☐ HP-4286A RF L.C.R. Meter. ☒ ZENTECH 3302 Automatic Components Analyzer. ☐ ZENTECH 101 L.C.R. Meter. ☐ WAYNE KERR 6420 Precision Impedance Analyzer. ☒ ZENTECH 1320 BIAS CURRENT. ☒ ZENTECH 502AC Resistance Merter. ☐ ADEX AX-1155B DC Low Ohm Meter.
TEST FREQUENCY	100	MHz	
RDC	0.1	(max) Ω	
IDC	2500	(max) mA	

TEST REPORT

Typical Impedance v.s. Frequency Curve



Test Instrument :

HP-4286A RF L.C.R. Meter.

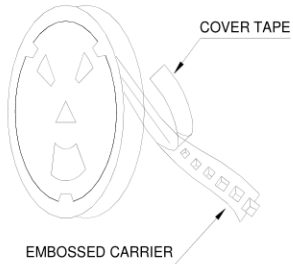
Testing Condition :

Temperature : 28°C

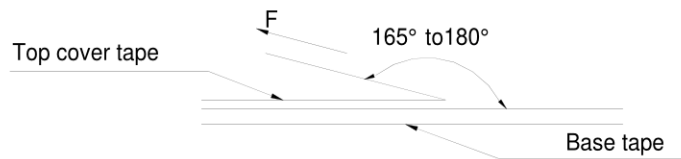
Humidity : 60 to 70 % RH

Packaging Information

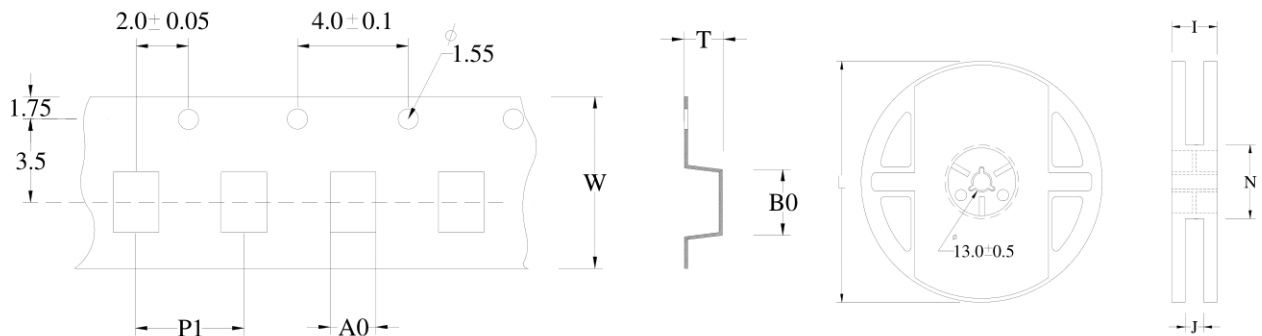
• Tearing Off Force



The force for tearing off cover tape is 10 to 100 grams in the arrow direction under the following conditions.



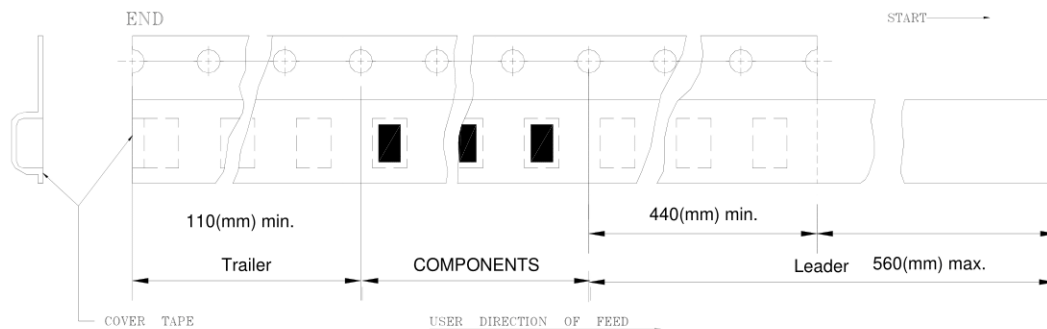
• Tape Dimension



Dimensions in mm

TYPE	A0	B0	P1	W	T		L	N	I	J
16X08X08A	1.03 ± 0.05	1.85 ± 0.05	4.00 ± 0.10	8.00 ± 0.10	0.95 ± 0.05		178 ± 2.00	50 MIN	20 MAX	10 ± 1.50

• Packaging Quantity



Type	16X08X08A
Q'TY/Reel	4000

Reliability and Test Condition

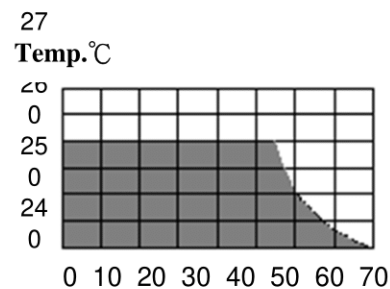
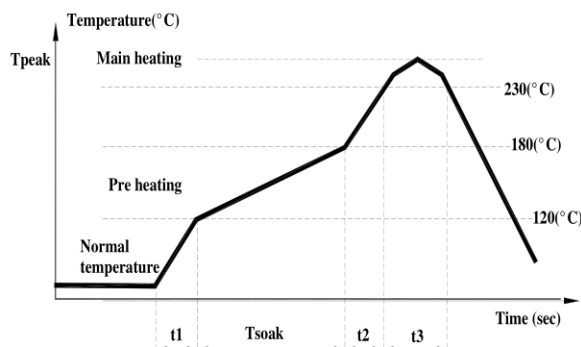
ITEM	SPECIFICATION	TEST CONDITIONS
Operating Temperature	- 55 °C ~ + 125 °C	
Storage Temperature	- 40 °C ~ + 85 °C	

Reflow soldering conditions

Temperature rise gradient	t1	1~5℃/sec
Heating time	Tsoak	50s ~ 150s
Heating temperature		120℃ ~ 180℃
Time over 230℃	t3	90~120 sec
Slope of temp. rise	t2	1~5℃/sec
Peak temperature	Tpeak	255~260℃
Peak hold time		10sec (max)
		No. of mounting 3 times

- Pre—heating should be in such a way that the temperature difference between solder and ferrite surface is limited to 150°C max. Also cooling into solvent after soldering should be in such a way that the temperature difference is limited to 100°C max.
Unenough pre—heating may cause cracks on the ferrite, resulting in the deterioration of product quality.
- Products should be soldered within the following allowable range indicated by the slanted line.
The excessive soldering conditions may cause the corrosion of the electrode, When soldering is repeated, allowable time is the accumulated time.

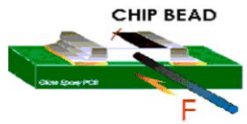
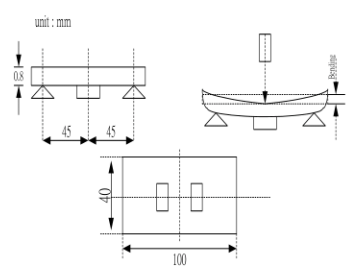
Reflow soldering temperature profile



Reliability and Test Condition

ITEM	SPECIFICATION	TEST CONDITIONS
Reworking with soldering iron - Preheating : 150℃, 1 minute - Tip temperature : 280℃ max. - Soldering time : 3 seconds max. - Soldering iron output : 30w max. - End of soldering iron : ϕ 3mm max. - Reworking should be limited to only one time. Note : Do not directly touch the products with the tip of the soldering iron in order to prevent the crack on the ferrite material due to the thermal shock. Solder Volume - Solder shall be used not to be exceed the upper limits as shown below.  - Accordingly increasing the solder volume, the mechanical stress to product is also increased. Exceeding solder volume may cause the failure of mechanical or electrical performance.		

MECHANICAL CHARACTERISTICS

ITEM	SPECIFICATION	TEST CONDITIONS
Terminal Strength	Terminal strength does not distort the case shall meet SPEC DC resistance specifications.	Solder chip on PCB and applied 10N (1.02Kgf) for 10 sec. 
Substrate bending test	SPEC substrate bending test DC resistance shall meet specifications.	- After soldering a chip to a test substrate, bend the substrate by 3mm hold for 10s and then return. - Soldering shall be done in accordance with the recommended PC board pattern and reflow soldering. 

Reliability and Test Condition

ITEM	SPECIFICATION	TEST CONDITIONS
Resistance to solder heat	- No visible damage - Electrical characteristics and mechanical characteristics shall be satisfied. Consult standard MIL-STD-202 METHOD 210	- Solder Temp. : $265 \pm 3^{\circ}\text{C}$ - Immersion time : 6 ± 1 sec - Preheating : 100°C to 150°C, 1 minute. - Measurement to be made after keeping keeping at room temp for 24 ± 2 hrs. - Solder : Sn-3Ag-0.5Cu
Solderability	95% min. coverage of all metabolised area Consult standard J-STD-002	- Solder Temp. : $240 \pm 5^{\circ}\text{C}$ - Immersion time : 3 ± 1 sec - Solder : Sn-3Ag-0.5Cu

Environmental Characteristics

ITEM	SPECIFICATION	TEST CONDITIONS
High Temperature Resistance	- Appearance : no mechanical damage - Impedance shall be with $\pm 30\%$ of the initial value	- Operate Temperature : $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$ - Time : 1000 ± 12Hrs - Measurement : After placing at room ambient temperature for 24 hours minimum
Biased Humidity Resistance	- Appearance : no mechanical damage - Impedance shall be with $\pm 30\%$ of the initial value	- Humidity : $85 \pm 5\%$ RH - Temperature : $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ - Time : 1000 ± 12Hrs - Measurement : After placing at room ambient temperature for 24 hours minimum
Temperature Cycle	- Appearance : no mechanical damage - Impedance shall be with $\pm 30\%$ of the initial value	- Low Temperature : $-55 \pm 5^{\circ}\text{C}$ kept stabilized for 30 minutes each - High Temperature : $125 \pm 5^{\circ}\text{C}$ kept stabilized for 30 minutes each - Cycle : 1000 cycles - Measurement : After placing for 24 hours minimum at room ambient temperature - step1. -55°C temp$\pm 5^{\circ}\text{C}$ 30± 3 minutes - step2. Room temperature 2 to 5 minutes - step3. $+125^{\circ}\text{C}$ temp$\pm 5^{\circ}\text{C}$ 30± 3 minutes - step4. Room temperature 2 to 5 minutes
Vibration test	- Appearance : no mechanical damage - Impedance shall be with $\pm 30\%$ of the initial value	- Frequency and Amplitude : 10-2000-10Hz - Direction : X, Y, Z. - Test duration : 4 hours for each direction, 12 hours in total.
Mechanical Shock Test	- Appearance : no mechanical damage - Impedance shall be with $\pm 30\%$ of the initial value	- peak acceleration : 100g's - Duration of pulse : 6 ms - Waveform : Half-sine - Velocity change : 12.3 ft/sec - Direction : X , Y , Z (3 axes/3 times)

Reliability and Test Condition

ITEM	SPECIFICATION	TEST CONDITIONS
Operational Life	- Appearance : no mechanical damage - Impedance shall be with $\pm 30\%$ of the initial value	- Temperature : $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$ - Time : $1000 \pm 12\text{Hrs}$ - Measurement : After placing at room ambient temperature for 24 hours minimum
Electrostatic discharge test	- Appearance : no mechanical damage - Impedance shall be with $\pm 30\%$ of the initial value	- ESD voltage ; 15K Volts - Mode 1 : 150 pF / 330 Ohm - Mode 2 : 150 pF / 2000 Ohm