

## **Dimension & Inner-configuration**





- a. Ag layer
- b. Ni/Sn plating
- c. Inner electrode
- d. Body
- e. Terminal electrode
- f. ferrite or ceramic

No.	Co	omponen	t	Material		
1		Body		Ni-Cu-Zi		
2	Inn	er electro	ode	Ag		
2			Ag layer	Ag		
3	Terminal electrode	Ni/Sn	Ni/Sn plating	Ni-Sn		

Unit mm inch

Size	L	W	Т	а
160808	1.6 0.20 0.063 0.008	0.8 0.20 0.031 0.008	0.8 0.20 0.031 0.008	0.3 0.2 0.01 0.008
201209	2.0 0.20 0.079 0.008	1.2 0.20 0.047 0.008	0.9 0.20 0.035 0.008	0.5 0.3 0.020 0.012
252010	2.5±0.20 0.098±0.008	2.0±0.20 0.079±0.008	1.0±0.20 0.039±0.008	0.5±0.3 0.020±0.012

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## **Product Spec. Model**



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## **Electrical Characteristics List**

Part NO.	Custom er P/N	Tolerance %	Inductance (µH)	RDC	Test frequency (MHz)	Test voltage mV	SRF (MHz) min	Rated current (mA)max
CMH201209A Series								
CMH201209A1R0MT		±20	1.0	0.14±25%	1	50	75	300
CMH201209A2R2MT		±20	2.2	0.224±25%	1	50	50	220
CMH201209A3R3MT		±20	3.3	0.24±25%	1	50	35	200
CMH201209A4R7MT		±20	4.7	0.30±25%	1	50	25	180
CMH252010A Series								
CMH252010A1R0MT		±20	1.0	0.08±25%	1	50	70	400
CMH252010A2R2MT		±20	2.2	0.12±25%	1	50	55	300
CMH252010A3R3MT		±20	3.3	0.144±25%	1	50	30	260
CMH252010A4R7MT		±20	4.7	0.18±25%	1	50	25	240



Part NO.	Custom er P/N	Tolerance %	Inductance (µH)	RDC	Test frequency (MHz)	Test voltage mV	SRF (MHz) min	Rated current (mA)max
CMH160808 Series								
CMH160808BR56MT		±20	0.56	0.12±30%	1	50	100	1050
CMH160808B1R0MT		±20	1.0	0.20±30%	1	50	98	900
CMH160808B1R8MT		±20	1.8	0.24±30%	1	50	95	750
CMH160808B2R2MT		±20	2.2	0.24±30%	1	50	95	750
CMH160808B4R7MT		±20	4.7	0.50±30%	1	50	65	700
CMH201209 Series								
CMH201209B1R0MT		±20	1.0	0.11±25%	1	50	75	1150
CMH201209B2R2MT		±20	2.2	0.20±25%	1	50	50	950
CMH201209B3R3MT		±20	3.3	0.22±25%	1	50	35	800
CMH201209B4R7MT		±20	4.7	0.30±25%	1	50	25	750
CMH201209B6R8MT		±20	6.8	0.35±25%	1	50	25	600



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# **Reliability Testing Items**

No.	Items	Requirements	Test Methods and Remarks
	Operating Temperature Range		
	Solder ability	At least 95% of terminal electrode should be covered with solder	$\begin{array}{c} :120 \ \ \sim \ 150 \\ : \ 60s \\ 96.5\% Sn/3.0\% Ag/0.5\% Cu \\ : \ 245 \ \ 5 \\ :10mm \\ : \ 5 \ \ 1s \\ : \ 3 \ \sim \ 5 \ s \\ \end{array}$ Preheating temperature:120 to 150 Preheating time: 60s Solder 96.5% Sn/3.0% Ag/0.5% Cu of the Sn solder. Solder temperature: 245 \ \ 5 \\ Immersion tin depth:10mm \\ Duration : \ 5 \ \ 1s \\ Dip performance to a flux of about:3 \ \sim \ 5 \ s \\ \end{array}
	Resistance to Soldering	At least 95% of terminal electrode should be covered with solder. No mechanical damage. Inductance B change within 30% A change within 30%	: 120 ~150 : 60s 96.5%Sn/3.0%Ag/0.5%Cu : 260 5 :10mm : 10 1s :3 ~ 5 s Preheating temperature: 120 to 150 Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 260 5 Immersion tin depth:10mm Duration : 10 1s Dip performance to a flux of about:3 ~ 5 s



No.	Items	Requirements	Test Methods and Remarks
	Adhesion of electrode	The termination and body should be no damage.	Applied force: 5N force for 1608 series. 10N force for 2012 2520series. Keep time 10±1S Chip Glass Epoxy Board Mounting Pad
	Low temperature resistance	No mechanical damage. Inductance change: within 10%	$+24 \\ 0$ Temperature $+24 \\ +24$ Testing time $0$
	Bending strength	No mechanical damage. Inductance change: within 10%	Testing board: glass epoxy-resin substrate For 0.5mm/s compression speed, curvature: 2mm, hold time 30 s 施压工具 F J T T T T T T T T T T T T T T T T T T
	Drop	No mechanical damage. Inductance change: within 10%	Drop 10 times on a concrete floor from a high of 1m.



No.	Items	Requirements	Test Methods and Remarks
	Vibration	No mechanical damage. Inductance change: within 10%	Amplitude modulation: 1.5mm Test time: A period of 2h in each of 3 mutually perpendicular directions. Frequency range: 10Hz to 55Hz to 10Hz for 1min.
	High temperature resistance	No mechanical damage. Inductance change: within 10%	$^{+24}_{0}$ Testing time: $1000^{+24}_{0}$ Temperature: 85 2
	Static Humidity	No mechanical damage. Inductance change: within 10%	+24 0 Humidity: 90% to 95% RH Temperature: 60 $\pm 2$ +24 Testing time: 1000 $^{0}$ h
	High temperature load	No mechanical damage. Inductance change: within 10%	+24 0 impose current: at room Testing time: $1000^{+24}_{-0}$ Temperature: 85 2



No.	Items	Requirements	Test Methods and Remarks
	Thermal Shock	No mechanical damage. Inductance change: within 10%	Temperature: -40 for $30\pm3min$ +85 for $30\pm3min$ Number of cycles: 32 +85°C 30 min 30 min Ambient -40°C 30 min 20sec. (max.)
Note: under	When there are r the standard c	questions concerning, measurement ondition.	shall be made after 24 2hrs of recovery

## 6 Packaging

### **Taping drawings**





## Reel dimensions (Unit:mm)

Size	А	В	С	Ν	G
CF-8	178±2.0	22.0±2.0	12.5±1.5	57±2.0	8
CF-12	330±2.0	22.0±2.0	12.5±1.5	98±2.0	12







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### Taping dimensions (Unit: mm)

#### Paper tape



Part NO.	А	В	F	Т
160808	1.1±0.2	1.9±0.2	4.0±0.2	1.1max
201209	1.5±0.2	2.3±0.2	4.0±0.2	1.1max

### Embossed tape







Peeling force should be 0.1~0.7N pulling in the direction of arrow.

300mm/min

Speed of peeling off: 300mm/min.

The cover bond should not be damaged and bond the tape when it peeled off.

SIZE	252010	201209	160808
REEL	3000	4000	4000
BOX	30000	40000	40000
CASE	180000	240000	240000

#### Packaging number (Unit: Pcs)

8)

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#### Label stick station



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**Recommend Soldering Conditions** 

### **Soldering Conditions**

Products can be applied to reflow and flow soldering.

## Soldering conditions

Pre-heating should be in such a way that the temperature difference between solder and ferrite surface is limited to 150 max. Also cooling into solvent after soldering should be in such way that the temperature difference is limited to 100 max. Un-enough 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.





Flow soldering profile



Iron soldering

Perform soldering at 350 on 30W max Time: < 5S

Take care not to apply the tip of the soldering iron

to the terminal electrodes

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# 8 Cleaning

### **Cleaning Conditions**

Cleaning temperature : 60 max Cleaning time: 1 minute min.

200W Ultrasonic output power: 200W max

## 9 Storage Requirements

### Storage period

Products which inspected in inductor company over 6 months ago should be examined and used,



which can be Confirmed with inspection No. marked on the container. Solder ability should be checked if this period is exceeded.

Storage conditions

Products should be storage in the warehouse on the following conditions:

Temperature : -10~+40 Humidity: 30~70% relative humidity

Don't keep products in corrosive gases such as sulfur, chlorine gas or acid , or it may case oxidization of Electrodes resulting in poor solder ability.

Products should be storaged on the palette for the prevention of the influence from humidity, dust and so on.

Products should be storaged in the warehouse without heat shock, vibration, direct sunlight and so on.

Products should be storaged under the airtight packaged condition.

## 10 Usage Of ODS

1 For ODS listed below , we don't use in process ODS: CCl4, HCFC, etc.

## 11 Notes

1 If the parcel label on product is "Unitary lead free" that indicate the products in accord with ROHS appointed requests.

2 This product specification guarantees the quality of our product as a single unit, Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.

3 We can't warrant against failure caused by any use of our product that deviates from the intended use as described in this product specification.