

Wire-Bondable Ceramic Capacitors

Y05 , Y08 , Y10 series

RoHS

Features

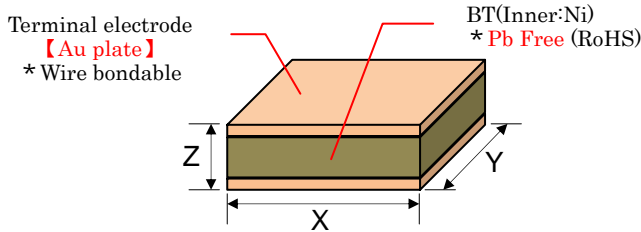
- Wire bondable
- Extremely thin, suitable for high density mounting
- Custom designs
- Excellent microwave characteristics
- Capable of high temperature operation-up to 125
- Ideal for by-passing applications

Application

- IC / Measurement equipments / Optical Device for telecommunication / etc.



Dimensions



Type	Unit	X	Y	Z
Y05	Inch	0.020in ± 0.004	0.020in ± 0.004	0.014in ± 0.004
	mm	0.5mm ± 0.1	0.5mm ± 0.1	0.35mm ± 0.1
Y08	Inch	0.032in ± 0.004	0.032in ± 0.004	0.020in ± 0.004
	mm	0.8mm ± 0.1	0.8mm ± 0.1	0.5mm ± 0.1
Y10	Inch	0.039in ± 0.004	0.039in ± 0.004	0.024in ± 0.004
	mm	1.0mm ± 0.1	1.0mm ± 0.1	0.6mm ± 0.1

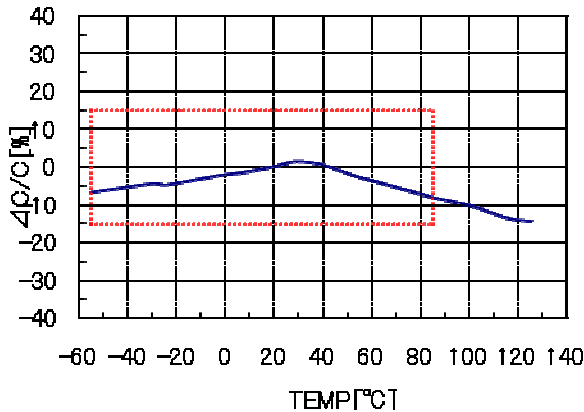
Configurations

Number Code	Type	Rated Voltage	Capacitance	Capacitance Tolerance	TCC	Operation TEMP.
Y0503X5R1C***M	Y05	16V _{DC}	~ 2.2nF (222)	M (± 20%)	X5R	-55 ~ +85
Y0805X5R1C***M	Y08	16V _{DC}	~ 10nF (103)	M (± 20%)	X5R	-55 ~ +85
Y1006X5R1C***M	Y10	16V _{DC}	~ 100nF (104)	M (± 20%)	X5R	-55 ~ +85

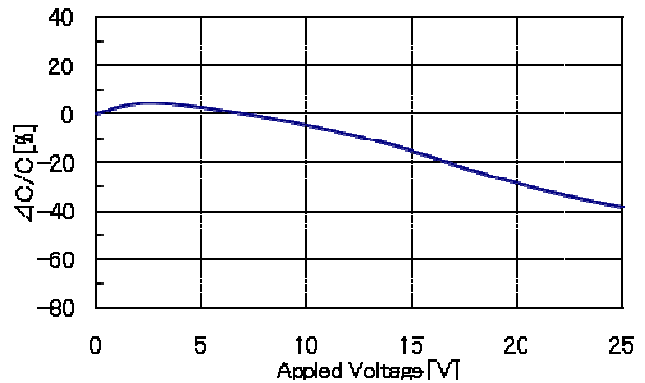
***: Capacitance will be applied (e.g. 10nF:103, 22nF:223)
Size and capacitance are customized. Please contact our sales representatives for further information.

Characteristic

TCC 【Y0805X5R1C103M】



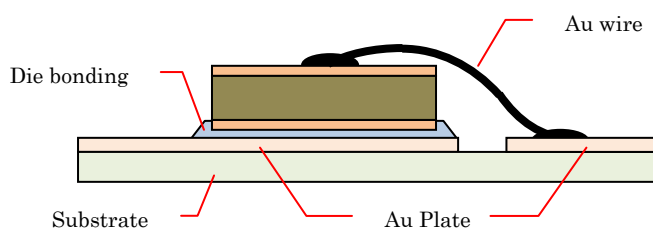
Bias CHAR. 【Y0805X5R1C103M】



Performance and Test Condition

Item		Performance	Test Condition (JIS C5101-1)
Operation TEMP.		X5R : -55~85	
Appearance		No abnormal exterior appearance	Watching
Insulation Resistance		10,000MΩ min or 500MΩ · μF min product whichever is smaller	Apply the rated voltage for 60sec
Withstanding Voltage		No dielectric breakdown or mechanical breakdown	Apply 250% of the rated voltage for 1~ 5sec
Capacitance		Within the specified tolerance	Frequency : 1kHz ±10% Voltage : 1.0V ±0.2V *Measurement after it heat-treats it
tan		5.0% max	
Adhesive Strength of Termination	Wire bonding	0.03N min	After Au wire bonding, strength is measured by the pull. (MIL-STD-883)
	Die bonding	2N min	It mounted by Au-Sn(20%), and strength to horizontal direction is measured. (MIL-STD-883)
Vibration Test	Appearance	No mechanical damage shall occur	Frequency : 10→55→10Hz(1min) Amplitude : 1.5mm Repeat this for 2hours each in 3 mutually perpendicular directions.
	Capacitance	ΔC/C : ±5.0%	
	tan	5.0% max	
	Insulation resistance	10,000MΩ min or 500MΩ · μF min product whichever is smaller	
Humidity Load	Appearance	No mechanical damage shall occur	Temperature : 40±2 Humidity : 90~95%RH Duration Time : 500+12/-0hr Applied Voltage : 100% of the rated Voltage
	Capacitance	ΔC/C : ±12.5%	
	tan	10% max	
	Insulation resistance	500MΩ min or 25MΩ · μF min product whichever is smaller	
High Temperature Load	Appearance	No mechanical damage shall occur	Temperature : 85±2 Duration Time : 1,000+48/-0hr Applied Voltage : 200% of the rated Voltage
	Capacitance	ΔC/C : ±12.5%	
	tan	10% max	
	Insulation resistance	1,000MΩ min or 50MΩ · μF min product whichever is smaller	
Temperature Cycle	Appearance	No mechanical damage shall occur	1. -55 - 30min 2. 25 - 3min 3. 85 - 30min 4. 25 - 3min It leaves on the condition from 1 to 4, and it is repeated by five cycles.
	Capacitance	ΔC/C : ±7.5%	
	tan	5.0% max	
	Insulation resistance	10,000MΩ min or 500MΩ · μF min product whichever is smaller	

Mounting example



It is very thin, and the best for IC package.

About the circuit design

1. Please make sure that heat temperature of the capacitors is 20 or below in designing circuits.
2. Size and capacitance are customized. Please contact our sales representatives for further information.