



SPEC NO.: CR-002HDIP

Specification

TO:STE508

Model Name: Ceramic Resonator

PART NO: ZTB912JCUSTOMER PART NO.:

Approval sheet:	
	Yes
Approved	No.
Customer's comments are welcomed here.	
Pls return this copy as a certificate of your approval by Fax.	
Approved By Date:	

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History Record

Date	Part No.	SPEC No.	Description.	Remarks.
	ZTB912J			
	ISO9001:2000	Approved by	Check by	Design by
RoHS Compliant Lead free Lead-free soldering	ISO14001:2004	May-15-2007	May-10-2005	Jan-16-1999
Reversions	Total Page	- Xu gang dong	Liu jun	Wang hon
		The yeary wordy		Journal Work



SPECIFICATION

1. SCOPE

This specification shall cover the characteristics of the ceramic resonator with the type ZTB912J.

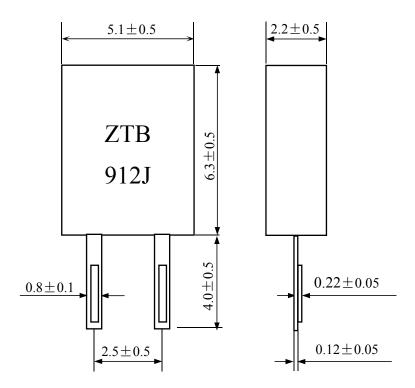
2. PART NO.:

PART NUMBER	CUSTOMER PART NO	SPECIFICATION NO
ZTB912J		

3. OUTLINE DRAWING AND DIMENSIONS:

- 3.1 Appearance: No visible damage and dirt.
- 3.2 Construction: Leads are soldered on electrode and body is molded by resin.

3.3 Dimensions:



UNIT: mm



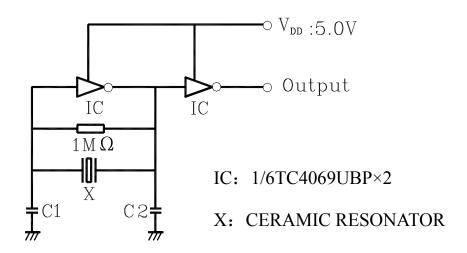
4. ELECTRICAL SPECIFICATIONS:

Oscillation Frequency Fosc (kHz)	912	
Frequency Accuracy (%)	±0.5	
Resonant Impedance Ro (Ω) max	70	
Temperature Coefficient of Oscillation	± 0.3 (Oscillation Frequency drift,	
Frequency (%) max	-25°C∼+85°C)	
	6VDC	
Rating Voltage UR (V) max	15Vp-p	
Withstanding Voltage	50VDC, 1min	
Insulation Resistance Ri, $(M \Omega)$ min	100 (100V, 1min)	
Operating Temperature Range (°C)	-20∼+80	
Storage Temperature Range (°C)	- 40∼+85	
Aging Rate (%) max	± 0.3 (For Ten Years)	

5. MEASUREMENT:

5.1 Measurement Conditions: Parts shall be measured under a condition (Temp.: 20±15°C, Humidity: 65±20% R.H.) unless the standard condition(Temp.: 25±3°C, Humidity: 65±5% R.H.) is regulated to measure.

5.2 Test Circuit:



6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

No	Item	Condition of Test	Performance
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			Requirements
6.1	Humidity	Subject the resonator at $+40 \pm 2$ °C and	It shall fulfill the
		90%-95% R.H. for 96 hours, resonator shall	specifications in
		be measured after being placed in natural	Table 1.
		conditions for 1 hour.	
6.2	High	Subject the resonator to $+85 \pm 5$ °C for 96	It shall fulfill the
	Temperature	hours, resonator shall be measured after being	specifications in
	Exposure	placed in natural conditions for 1 hour.	Table 1.
6.3	Low	Subject the resonator to -25 ± 5 °C for 96	It shall fulfill the
	Temperature Exposure	hours, resonator shall be measured after being placed in natural conditions for 1 hour.	specifications in Table 1.
6.4	Temperature	Subject the resonator to -25° C for 30 min.	It shall fulfill the
	Cycling	followed by a high temperature of $+85 ^{\circ}\mathrm{C}$	specifications in
		for 30 min. Cycling shall be repeated 5 times.	Table 1.
		Resonator shall be measured after being	
		placed in natural conditions for 1 hour.	
6.5	Vibration	Subject the resonator to vibration for 2 hours	It shall fulfill the
		each in x y and z axis with the amplitude of	specifications in
		1.5mm, the frequency shall be varied	Table 1.
		uniformly between the limits of 10Hz-55Hz	
		and then resonator shall be measured.	
6.6	Mechanical	Resonator shall be measured after 3 times'	No visible damage
	Shock	random dropping from the height of 70cm on	and it shall fulfill
		concrete floor.	the specifications in
	-		Table 1.
6.7	Resistance to	1	It shall fulfill the
	Soldering	from resonator's body in soldering bath of	specifications in
	Heat	260 ± 5 °C for 5 ± 1 seconds and then	Table 1.
		resonator shall be measured after being placed	
60	Caldarability	in natural conditions for 1 hour	More than 95% of
6.8	Solderability	Lead terminals are immersed up to 2mm from resonator's body in soldering bath of 235 ±	More than 95% of the terminal surface
		resonator's body in soldering bath of 233 \pm 5°C for 2 ± 0.5 sec.	of the resonator
		J C 101 2 ± 0.3 Sec.	shall be covered
			with fresh solder.
			with ficsh soluct.

6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

(Continued from the preceding page)

No	Itom	Condition of Test	Performance
No	Item	Condition of Test	Requirements



6.9	Terminal		No visible damage
	Strength		and it shall fulfill
6.9.1	Terminal	Force of 5N is applied to each lead in axial	the specifications
	Pulling	direction for 10 ± 1 sec.	in Table 1.
6.9.2	Terminal	When force of 5N is applied to each lead in	
	Bending	axial direction,the lead shall folded up 90°	
		from the axial direction and folded back to	
		the axial direction. The speed of folding	
		shall be each 3 seconds.	

Table 1

Item	Specification after test
Oscillation Frequency Change	± 0.3 (Refer to the initial value)
Δ Fosc/Fosc (%) max	±0.3 (Refer to the linual value)

Note: The limits in the above table are referenced to the initial measurements.

7. REVIEW OF SPECIFICATIONS

When something gets doubtful with this specifications, we shall jointly work to get an agreement.