

# ZTT...MX Ceramic Resonator

#### DESCRIPTION

The ZTT MX series ceramic resonator is the miniature low profile frequency control products with built-in capacitor. It is of very competitive price than quartz crystal parts and of high stability that make of substitute the quartz crystal when need lower price.

ELECTRICAL SPECIFICATION			
Frequency Range		13.01 to 50.00MHz	
Frequency Tolerance (at 25°C)		±0,5% Maximum	
Temperature Drift of Oscillate Frequency		±0,3% Maximum	
Resonant Impedance		40Ω Maximum	
Insulate Resistance		100MΩ minimum	
Withstanding Voltage D.C.		100V (max. 5 seconds)	
Built-in Capacitance		30pF	
Operating Temperature Range		-20°C to +80°C	
Storage Temperature Range		-55°C to +85°C	
Valtaga	D.C. Voltage	6V Maximum	
vollage	Input Voltage	15Vpp Maximum	
Aging (at 25°C)		±0.3%	

## PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS (Conditions/Results)

### 1. Terminal Strength

Force of 1Kg is applied to each lead in axial direction, keep for 10sec, then force of 0.5kg is applied to each lead is aerial direction. The lead shall be bend 90° degree in one direction, then in the opposite direction and return to normal. **Results:** Non-evident damage

# 2. Resistance to Soldering Heat

Lead terminals are immersed up to 2.0mm of body in a solder bath (260  $\pm$ 5°C), keep for 5sec.  $\pm$ 0.5sec, then return to normal temp. for 24hrs  $\pm$ 2hrs. **Results:** Non-evident damage and meet table-1, the mark is clear.

#### 3. Temperature Cycling

Subject the resonator to  $-55^{\circ}$ C for 30 minutes followed by a high temperature of  $+85^{\circ}$ C for 30 minutes, 5 cycles. Return to normal temperature for 24hrs ±2hrs prior to the measurement.

Results: Non-evident damage and meet table-1, the mark is clear.

#### 4. Vibration

Vibration: frequency: 10 to 55Hz, amplitude: 1.5mm, keep for 6 hrs. Results: Non-evident damage and meet table-1, the mark is clear.

#### 5. Shock

Va: 294 m/s², pulse time: 18ms

Results: Non-evident damage and meet table-1, the mark is clear.

## 6. Low Air Pressure

Air pressure: 8.5kPa keep for 2hrs. **Results:** Non-breakthrough or arc and meet table-1, non-evident damage the mark is clear.

#### 7. Damp & Heat (steady state)

Temperature:  $40^{\circ}C \pm 2^{\circ}C$ , humidity: 90 to 95%. Keep for 500hrs, return to normal temperature for 24hrs  $\pm 2$ hrs.

Results: Non-evident damage and meet table-1, the mark is clear.

## 8. Life test

Temperature: +85  $^\circ\text{C}$  , keep for 1000hrs, return to normal temperature for 24hrs ±2hrs. Results: Meet Table-1.







TABLE 1

No.	Test item	The value can be changed
1	Oscillate Frequency Max.	±0,3%
2	Resonant Impedance	±5Ω Maximum
3	Insulate Resistance	100MΩ minimum

## PART NUMBERING SYSTEM (Example)



### **RELM - SHOULDER Brasil**

# Lead