

# LEADED CERAMIC RESONATOR

HWZT-MD

\*C = Pb in ceramic (exempt per RoHS 2002/95/EC Annex (7)) \***C/RoHS**  
Compliant



## FEATURES:

- Low resonant impedance.
- Small size, Light weight.
- Low cost timing solution.

## APPLICATIONS:

- Clock oscillation for microcontrollers
- Telephones
- Household electric appliances

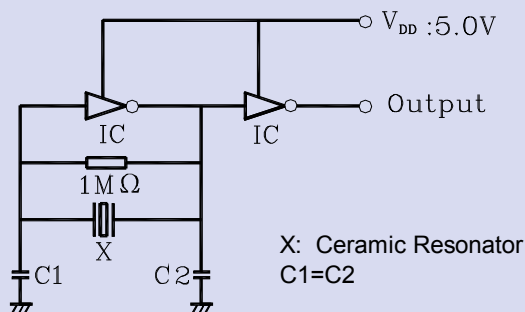
## STANDARD SPECIFICATIONS:

Item	Requirement
Frequency Range	2.00MHz to 6.00MHz
	8.01MHz to 50.00MHz
Resonant Impedance	See Table 2.1
Frequency Tolerance	± 0.5%
Frequency Stability	±0.3% max. (-25°C to +85°C)
Withstanding Voltage	50V (DC , 1 min)
Rating Voltage	
(1) D.C.Voltage	6 V.D.C. max
(2) A.C. Voltage	15 Vp-p. max
Load Capacitance	See Table 2.1
Insulation Resistance	100M $\Omega$ min. (DC 10V)
Operation Temperature	-25°C to +85°C
Storage Temperature	-55°C to +85°C
Aging Rate (Fosc)	±0.3% max. (From initial value)

Table 2.1

Frequency Range (MHz)	Resonant Impedance (Ro)( $\Omega$ ) max	Load Capacitance C1=C2 (pF)
2.00 MHz - 2.99 MHz	80	30pF± 20%
3.00 MHz - 3.49 MHz	50	
3.50 MHz - 6.00 MHz	30	
8.01 MHz - 13.00 MHz	30	
13.01 MHz - 20.00 MHz		15pF± 20%
20.01 MHz - 25.99 MHz		
26.00 MHz - 50.00 MHz		

## TEST CONDITION AND TEST CIRCUIT:



X: Ceramic Resonator  
C1=C2

Parts shall be measured under a condition (Temp.: 20 $\pm$ 15°C, Humidity: 65 $\pm$ 20% R.H.) unless the standard condition (Temp: 25 $\pm$ 2°C, Humidity: 65 $\pm$ 5% R.H.) is regulated to measure

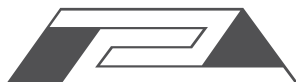
## OPTIONS & PART IDENTIFICATION:

HWZT - XX.XXMD - ☐

Frequency
Frequency in MHz

Packaging
Blank for Bulk pack
A for AMMO pack*

\* AMMO pack lead length 13.5mm



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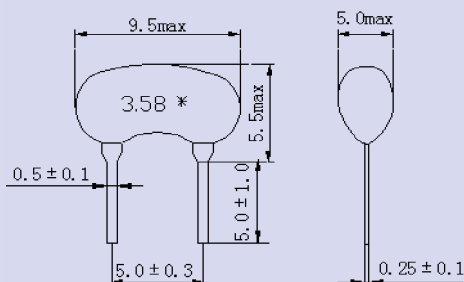


Size Varies

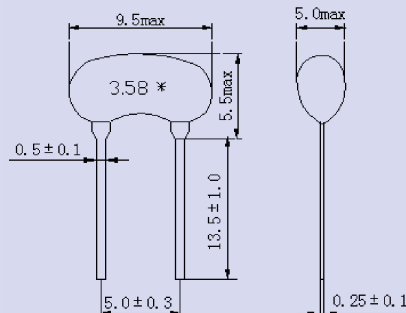
## OUTLINE DRAWING:

Frequency Range: 2.00 MHz ~ 6.00 MHz (Low Profile)

Bulk Pack

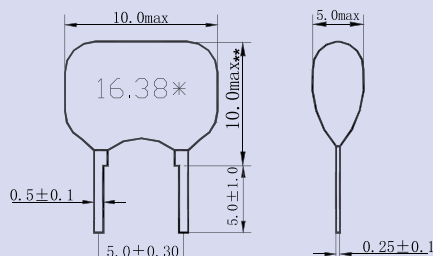


AMMO Pack



Frequency Range: 8.01 MHz ~ 50.00 MHz

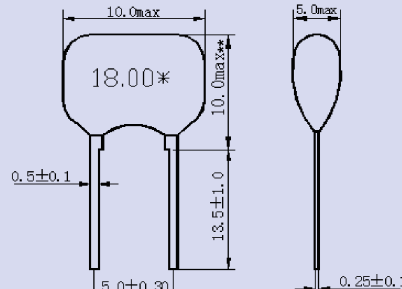
Bulk Pack



\*:EIAJ MONTHLY CODE

\*\*:  
12.00MHz ~ 23.99MHz, 10.0max  
24.00MHz ~ 31.99MHz, 7.5max  
32.00MHz ~ 50.00MHz, 6.5max

AMMO Pack



\*:EIAJ MONTHLY CODE

Dimensions: mm

## CAUTION

- Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components as this will cause damage to the component.
- This component is not hermetically sealed. Do not clean or wash the component.
- Reflow Soldering: Do not use strong acidity flux, such as flux with chlorine content of greater than 0.2wt% during Reflow Soldering.
- Do not expose the component to open flame.
- This specification applies to the functionality of the component as a single unit. The customer is advised to insure that the component is thoroughly evaluated in the application circuit.
- Shelf Life: The warranted Shelf Life of this product is Six Months after the Delivery Date under the conditions of sealed, unopened, original packaging.
- Storage Conditions: If the product is to be stored for a period greater than Six Months after the Delivery Date, it is recommended that the customer confirm the solderability and characteristics for the product prior to use.
- This product is not recommended for use in industrial related Automotive, Medical, Safety, Military, or other high-reliability life dependant applications. Contact Abracon Corporation prior to using this product when in doubt.