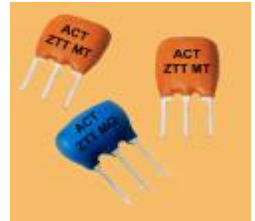


## ACT ZTT Through Hole Resonators

The ACT ZTT family of Ceramic Through Hole Resonators offers a cost effective solution to those applications for applications requiring a wide temperature range, together with accuracy.



### Specification

Part Type/ Number	Frequency Range MHz	Test IC	Vdd	Frequency accuracy @25°C (%)	Stability over temp. range (-20 +80°C)(%)	Aging over 10 years (%)	Internal Cap. (pF) C1 & C2
ZTT MG	1.80 ~ 8.00	CD4069UBE x 2	+5V	±0.5	±0.3	±0.3	30 (over range)
ZTT MT	5.00 ~ 13.00#	CD4069UBE x 2	+5V	±0.5	±0.3	±0.3	30 (over range)
ZTT MX	13.01 ~ 20.00	74HCU04 x 2	+5V	±0.5	±0.3	±0.3	22 (over range)
	20.01 ~ 26.00						15 (over range)
	26.01 ~ 60.00##						5 (over range)

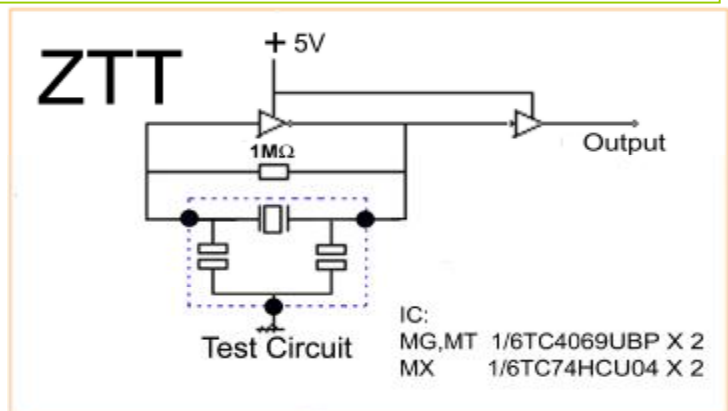
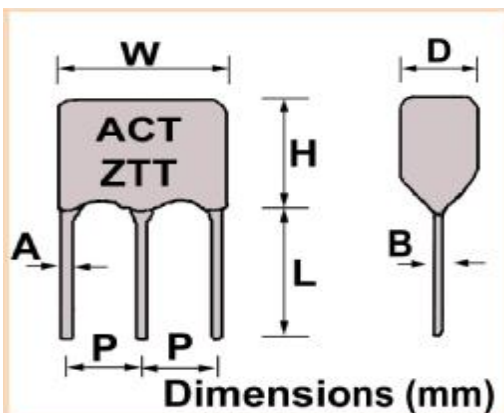
Vibration mode: **MG** Thickness shear **MT** Thickness expander **MX** Thickness expander ( third overtone)

# Frequencies between 5.0 & 8.0MHz it recommended that the MG version is used as the characteristics are better

## Frequencies between 50.01 and 60 MHz specification may vary from above please enquire.

### Lead Free - RoHS comp.

The Piezo Electric Ceramic contains lead greater than the RoHS limit as an inapplicability substance. Excluded from RoHS legislation.



Type No.	H	W	D	P	L	A	B
Dimensions mm (max)							
ZTT MG	1.80 ~ 8.00	8	10	5	2.5 ±0.3	5.0 ±0.1	0.5 ±0.1
ZTT MT	5.00 ~ 13.00#	10	10	5	2.5 ±0.3	5.0 ±0.1	0.5 ±0.1
ZTT MX	13.01 ~ 60.00	10	10	5	2.5 ±0.3	5.0 ±0.1	0.5 ±0.1

### Important note when using Ceramic resonators with microcontrollers

Some resonator parameters vary considerably with frequency and physical construction/size . These differences are too great to be able to be practically shown in a data sheet.

However, these parameters can be critical when the resonators are used with microcontrollers. Even if two different resonators appear to have the same specification the typical values of these critical parameters can be considerably different. When enquiring about resonators for use with microcontrollers it is important to supply the make and part number of the IC to be used and/or the list of recommended resonators, if this is given.

Please note that all parameters can not necessarily be specified in the same device

Customer to specify : Frequency, Package Type and Size

In line with our ongoing policy of product evolution and improvement, the above specification may be subject to change without notice

ISO9001:2000 Registered - Registration number 6830/2

For quotations or further information please contact us at:

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Issue :6 C1r  
 Date 10/10/05