

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.

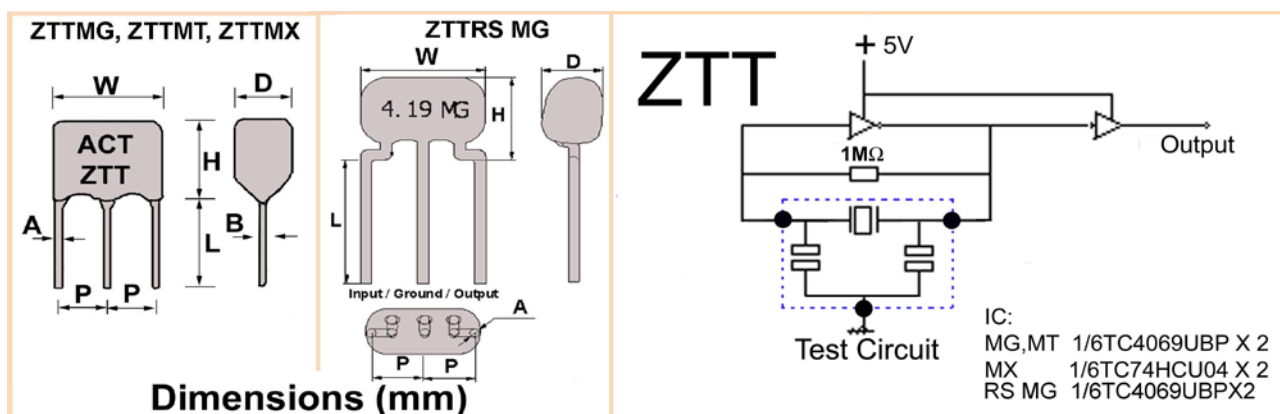


Specification

Part Type/ Number	Frequency Range MHz	Test IC	Vdd	Frequency accuracy @25°C (%)	Stability over temp. range (-20 +85°C)(%)	Aging over 10 years (%)	Internal Cap. (pF) C1 & C2
ZTT RS	6.00~12.00	TC4069UBP X 2	+5V	±0.5	±0.3	±0.3	15
ZTT WS	1.84~6.00	TC4069UBP X 2	+5V	±0.5	±0.3	±0.3	30
ZTT MT	6.00 ~ 13.00	TC4069UBP X 2	+5V	±0.5	±0.3	±0.3	30
ZTT MX	12.0 ~ 20.00						22
	20.01 ~ 26.00	74HCU04 x 2	+5V	±0.5	±0.3	±0.3	15
	26.01 ~ 60.00##						5
ZTTRS **	3.00 ~6.00	TC4069UBP X 2	+5V	±0.5	±0.3	±0.3	15

Vibration mode: RS/WS=MG Thickness shear MT Thickness expander MX Thickness expander (third overtone)
 ** ZTTS Not recommended use ZTTWS , ZTT MT rarely used for 6~12MHz use ZTTS
 ## Frequencies between 50.01 and 60 MHz specification may vary from above please enquire.

Note MOQ 500 pieces, apart from development samples and thereafter quantities in multiples of 500 pieces



Type No.	Frequency MHz	H	W	D	P	L	A	B
ZTT RS	3.00 ~6.00	5.5	6	3.1	2.5 ±0.2	3.5 ±0.5 #		0.48±0.05 dia
ZTT WS	1.84~6.00	5.5	9.5	4	2.5 ±0.3	5.0 ±0.1	0.5 ±0.1	0.25 ±0.1
ZTT MT	6.00 ~ 13.00	10	10	5	2.5 ±0.3	5.0 ±0.1	0.5 ±0.1	0.3 ±0.1
ZTT MX	12.00 ~ 13.00	12	10	5	2.5 ±0.3	5.0 ±0.1	0.5 ±0.1	0.3 ±0.1
	13.01 ~ 60.00	10	10	5	2.5 ±0.3	5.0 ±0.1	0.5 ±0.1	0.3 ±0.1

13.5mm min lead length option available.

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 Registered

For quotations or further information please contact us at:

3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK

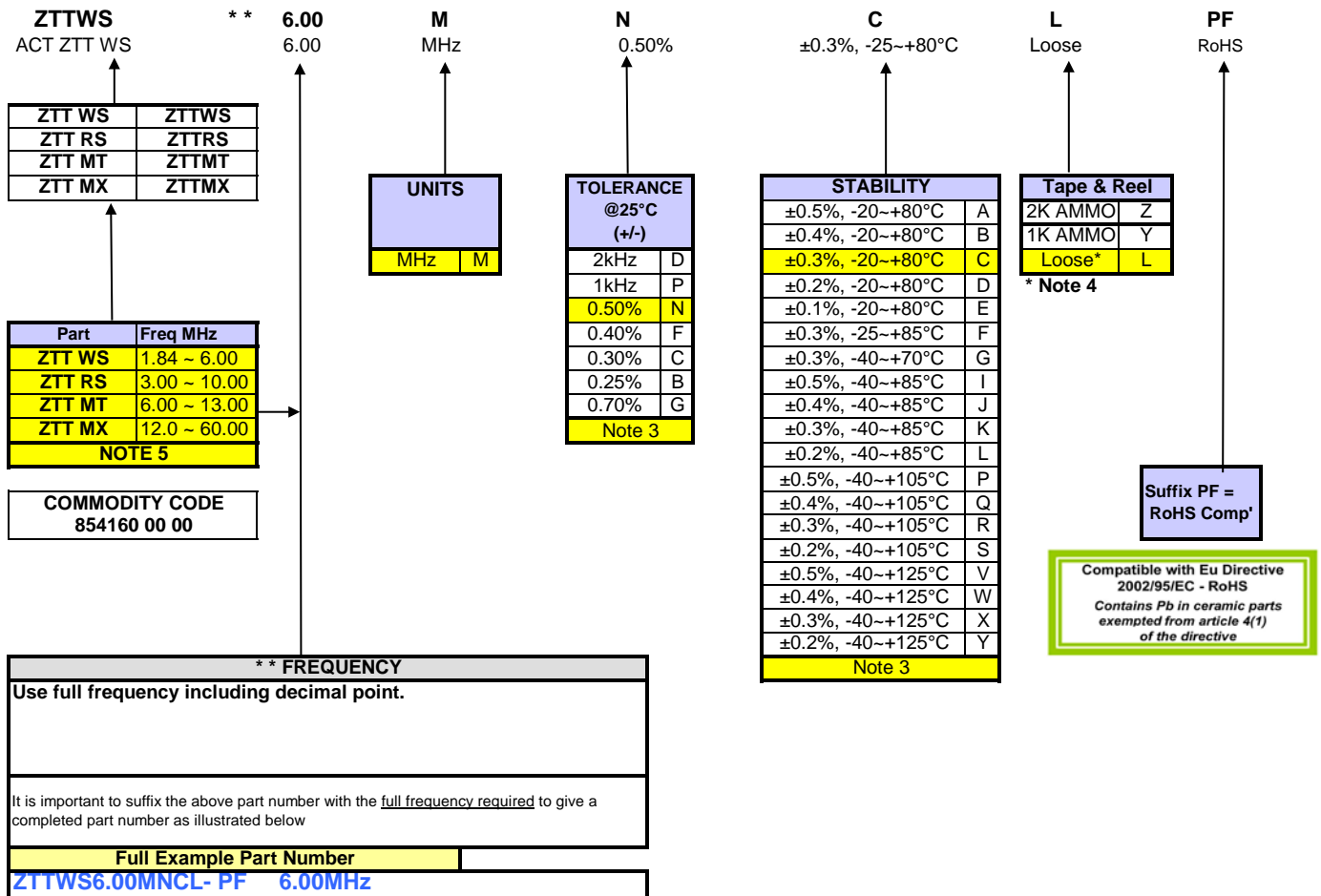
<http://www.actcrystals.com>

Issue :16 C1r

Date 05/02/2013

ACT CERAMIC RESONATORS- PART NUMBERING & COMMODITY CODE

Standard (Popular) Specifications Highlighted - Others available (Note 3)



- 1) Tighter Stabilities, tolerances, Output Loads and Operating Temperature Ranges may be available.
 As each of these specification parameters may impact on each other, it is not always possible to combine all options in one device. Therefore, if a specification not catered for above is required, please contact us directly for assistance.
- 2) ACT are always happy to consider truly custom specification parts which may require non-standard specification parameters, specific testing, customer requested AQL requirements, non standard packaging or taping and reeling and custom marking. (MOQ DEPENDENT) Such devices would normally be allocated a custom specification
 (An ACT ZTT WS device may have a part number such as : ZTTWS6.00-C1501-PF)
- 3) Enquire if a stability and / or tolerance other than the standard(s) highlighted in yellow is required.
- 4) Note MOQ 500 pieces, apart from development samples and thereafter quantities in multiples of 500 pieces
- 5) ZTT RS Not recommended for 3.00 ~6.00MHz use ZTT WS MG , ZTT MT rarely used for 6~12MHz use ZTT RS

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