

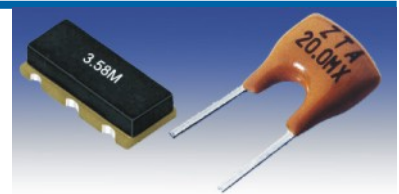
# CERAMIC RESONATOR

## ZTA Series, DIP and CHIP Type



### SCOPE

This specification relates to piezoelectric ceramic resonator to be used in a clock generating circuit for microprocessors



### TECHNICAL CHARACTERISTICS FOR DIP TYPE

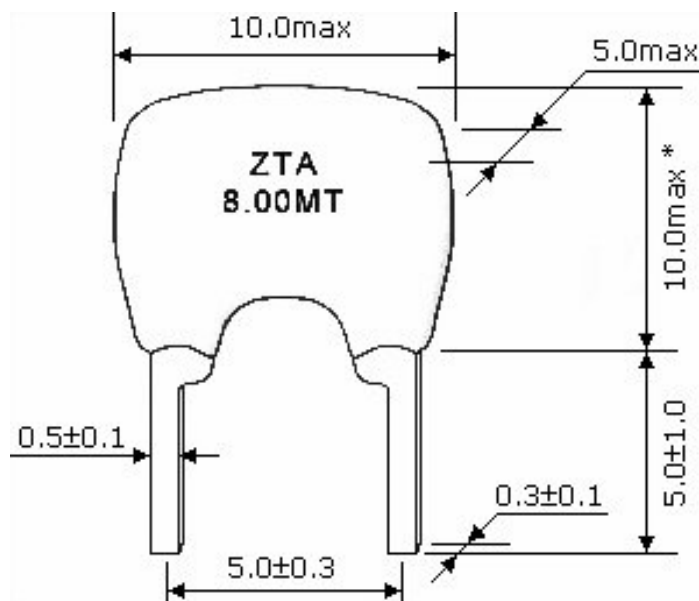
Part Number	Frequency Range(MHz)	Frequency Accuracy (25°C) (%)	Stability in Temperature (-20--+80°C) (%)	Operating Temperature (°C)	Aging for ten years (%)
ZTA...MG	1.80-6.00	±0.5	±0.3	-20--+80	±0.3
ZTA...MT	6.01-13.00	±0.5	±0.3	-20--+80	±0.3
ZTA...MX	13.01-50.00	±0.5	±0.3	-20--+80	±0.3

### TECHNICAL CHARACTERISTICS FOR CHIP TYPE

Part Number	Frequency Range(MHz)	Frequency Accuracy(%)	Stability in Temperature (-20--+80°C) (%)	Aging for ten years(%)
ZTACC...MG	1.79-8.00	±0.5	±0.3	±0.3
ZTACR...MG	4.00-8.00	±0.5	±0.3	±0.3
ZTACS...MT	6.00-8.00	±0.5	±0.4	±0.3
ZTACV...MT	8.00-13.00	±0.5	±0.4	±0.3
ZTACS...MX	13.01-60.00	±0.5	±0.3	±0.3
ZTACV...MX	16.00-60.00	±0.5	±0.3	±0.3
ZTACW...MX	20.00-60.00	±0.5	±0.3	±0.3

### DIMENSIONS (MM)

#### ZTA



\* MT: 10.0max  
 MX: 32.00~60.00MHz, 6.5max  
 24.00~31.99MHz, 7.5max  
 12.00~23.99MHz, 10.0max

Great Marking (HK) Industry Co., Limited.

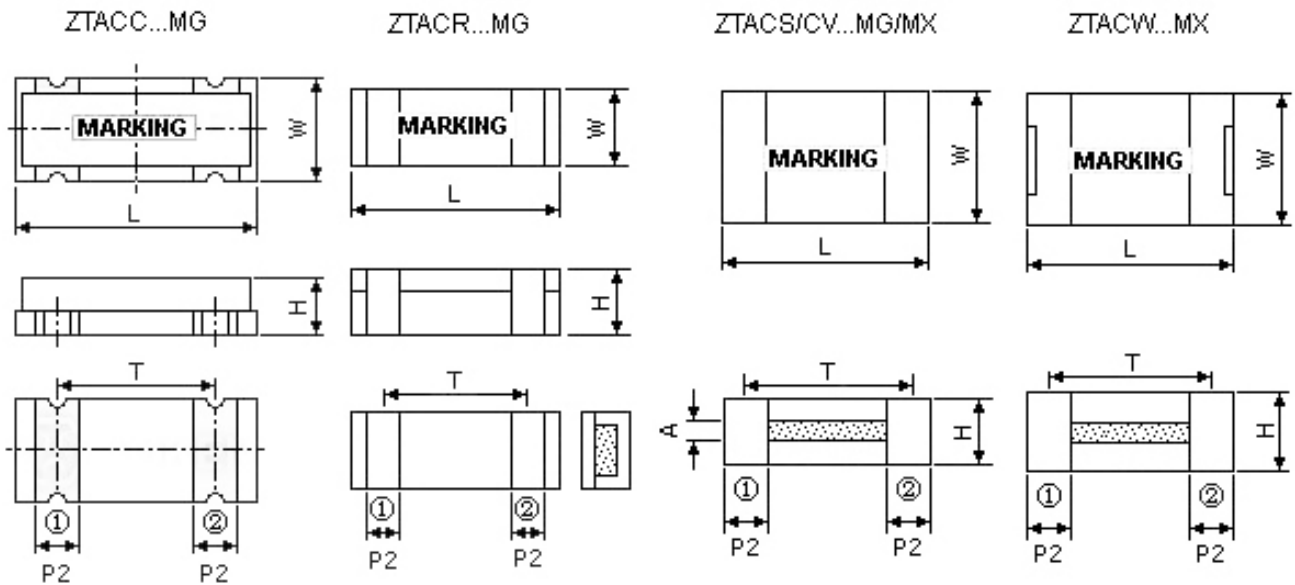
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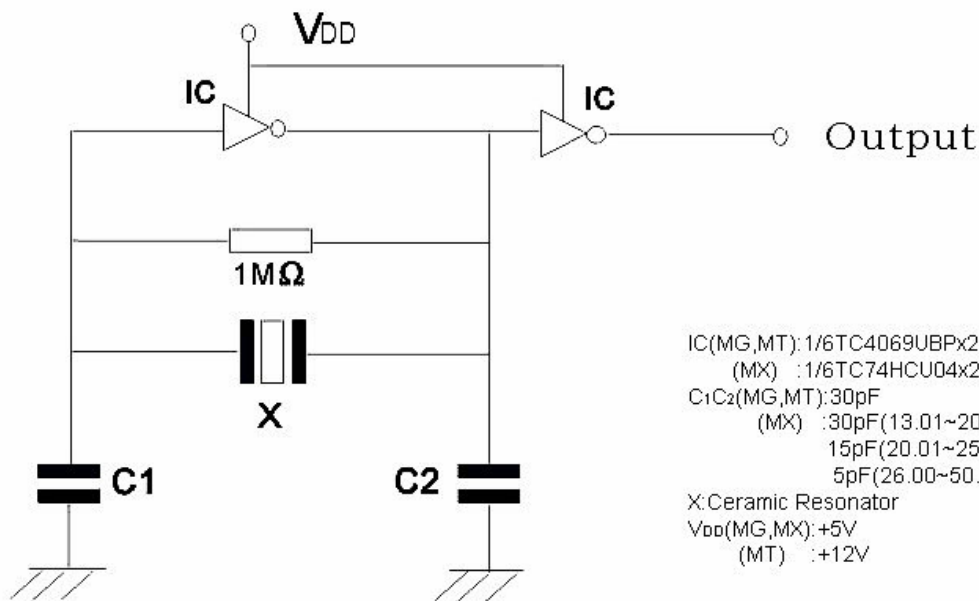


①Input      ②Output

Part Number	Dimensions(mm)				
	L	W	H	P2	T
ZTACC...MG	7.4±0.2	3.4±0.2	1.8±0.2	1.2±0.2	5.0±0.3
ZTACR...MG	4.5±0.2	2.0±0.2	1.2max	0.8±0.2	3.0±0.2
ZTACS...MT/MX	4.7±0.1	4.1±0.2	(1.2+A)±0.2	0.8±0.2	3.9±0.2
ZTACV...MT/MX	3.7±0.2	3.1±0.2	(1.0+A)±0.2	0.7±0.2	3.0±0.2
ZTACW...MX	2.5±0.2	2.0±0.2	1.5max	0.4±0.2	2.0±0.2

**Note:** A stands for thickness of the ceramic element, which varies with the frequency. The range of the thickness is 0.1 to 0.7mm.

### TEST CIRCUIT FOR MOS IC



IC(MG,MT): 1/6TC4069UBPx2  
 (MX) : 1/6TC74HCU04x2  
 C1C2(MG,MT): 30pF  
 (MX) : 30pF(13.01~20.00MHz)  
 15pF(20.01~25.99MHz)  
 5pF(26.00~50.00MHz)  
 X: Ceramic Resonator  
 VDD(MG,MX): +5V  
 (MT) : +12V

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