1、Scope

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

2、Part Number: ZTA8.0MT ZTT8.0MT

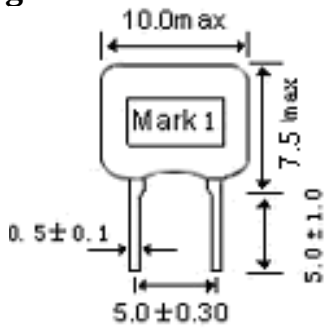
3、Electrical Characteristics

No.	Item	Requirements
1	Oscillating Frequency	8.0MHz ±0.5%
2	Resonant Resistance	30Ω max
3	Temperature Stability of Oscillating Frequency(-20 to 80℃)	±0.5%
4	Rated Voltage	DC50Vmax
5	Maximum Input voltage	15Vp-p
6	Insulation Resistance	100MΩ min
7	Operating Temperature	-20 to 80℃
8	Storage Temperature	-30 to 85℃
9	Aging	±0.3%

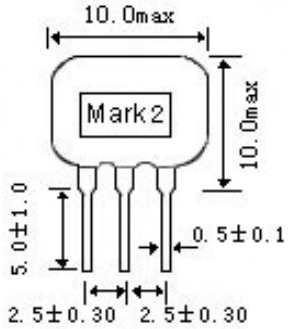
4、Test Condition and Circuit

Test Condition: Temperature, 10℃ to 30℃
Humidity, R.H.40% to 80%
Oscillating frequency measuring circuit:Figure 2
Other electrical properties with HP 4149A

Figure 1 Dimensions



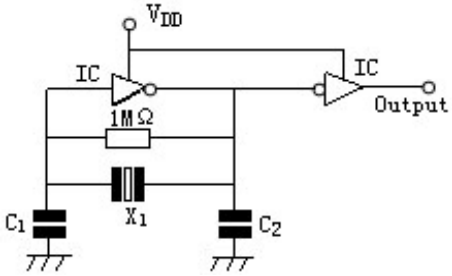


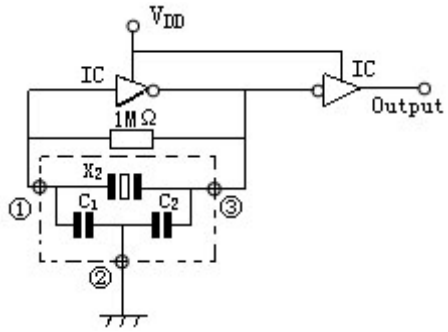




Mark1: ZTA8.0MT Mark2: ZTT8.0MT

Figure 2 Test Circuit





X1: ZTA8.0MT X2: ZTT8.0MT
VDD=5.0V
IC:1/6TC4069UBP×2
C1=C2=30PF

5、 Physical and Environmental Characteristics

1）Humidity After the resonator is placed in a chamber with 90 to 95% R.H. at 40±2℃ for 100 hours and then is placed in natural condition for 1 hour, the measured values shall meet Table 1.

2）High Temperature After the resonator is placed in a oven with 85±5℃ for 100 measured and then is placed in natural condition for 1 hour, the measured values shall meet Table 1.

3）Low Temperature After the resonator is placed in a oven with -30±5℃ for 100 hours and then is placed in natural condition for 1 hour, the measured values shall meet Table 1.

4）Heat Shock After the heat cycle that the resonator is kept at -30℃ for 30 minutes and then immediately is placed at 85℃ for 30 minutes is repeated 10 times and then the resonator is placed in natural condition for 1 hour, the measured value shall meet Table 1.

5）Random Drop After the resonator is randomly dropped 3 times on concrete floor from the height of 1m,the measured values shall meet Table 1.

6）Vibration After the vibration of amplitude of 1.5mm with varying frequency from 10 to 55 Hz for 10 minutes is applied to the resonator to x,y,z directions,respectively,the measured values shall meet Table 1.

7）Solder Heat After the lead terminals are immersed up to 2mm of the resonator body in soldering bath of 260±10℃ for 10 seconds And then the resonator is placed in natural condition for 1 hour, the measured values shall meet Table 1 and the surface of the case shall not show any visible damage.

8）Solderability When lead terminals are immersed in soldering bath of 230±5℃ for 5 seconds, 95% of lead terminals shall be wetted with solder.

9）Terminal Strength After the static load of 1 kg is applied to each terminal in axial direction for 10 seconds,the measured value shall meet Table 1 and the resonator shall not show any visible damage.

Table 1.Requirements of electrical characteristics with environments

Item	Requireme
Oscillating Frequency	±0.3%
Resonant Resistance	30Ω max