Shoulder 好达

SHOULDER ELECTRONICS CO., LTD.

CERAMIC RESONATOR Data Sheet

PRODUCT 产 品: CERAMIC RESONATOR

MODEL NO 型 号: ZTT....MT

PREPARED 编 制: Fengyu

CHECKED 审 核: York

APPROVED 批 准:

DATE 日 期: 2007-01-25

1. Scope:

The specification is fit for ceramic resonator 6.01-13.00MHz.

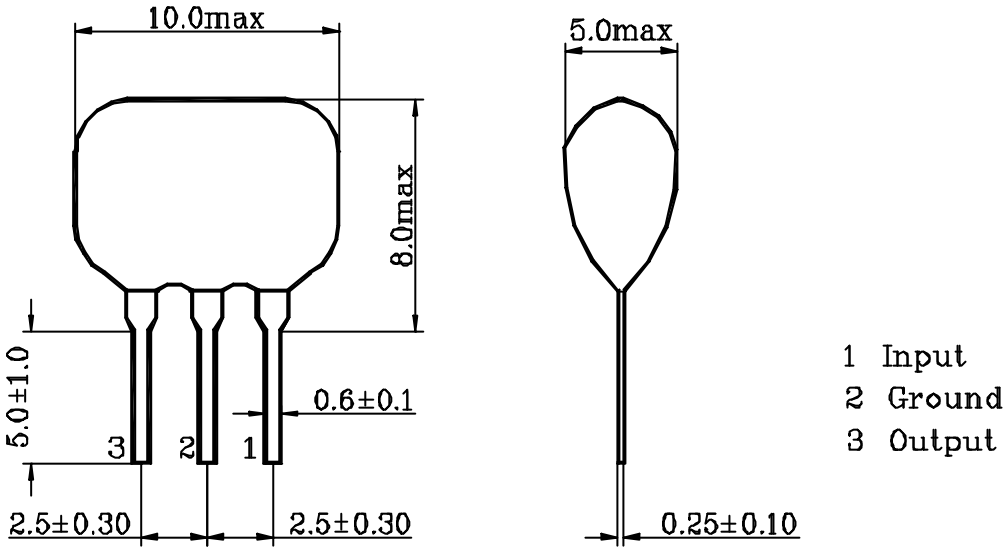
2. Model Name:

Model Name	Customer' s part number	Customer' s spec number
ZTT..MT		

3. Outside Dimensions:

3-1 Outsider: The mark is clear. The appearance is smooth, non-dirty & non-damage.

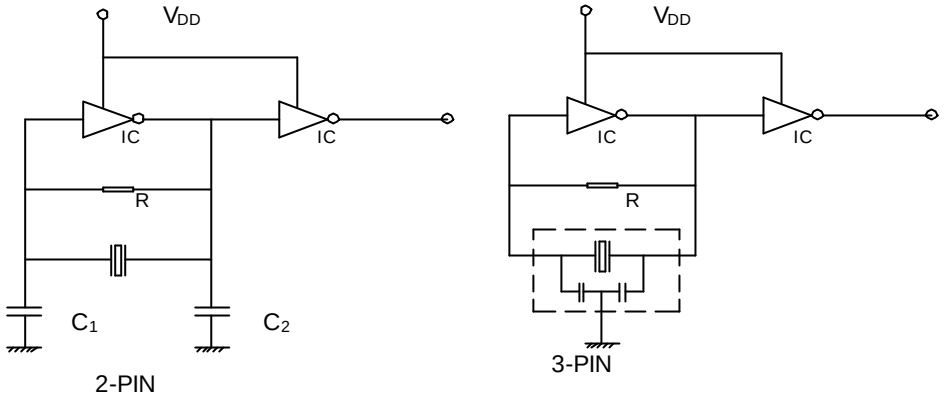
3-2 Outsider dimension:



4. Electrical Characteristics:

No.	Item	Characteristics
		ZTT..MT
4-1	Oscillate Frequency (MHz)	6.01-13.00
4.2	Frequency Tolerance max	±0.5%
4.3	Resonant Impedance max(Ω)	25
4.4	Built – in Capacitance (PF)	30
4.5	Insulate Resistance min(MΩ)	100
4.6	Withstanding Voltage D.C(V)	100（max 5 sec）
4.7	Voltage （1） D.C Voltage max（V） （2） Input Voltage max（V）	 6 15Vp-p
4.8	Temp characteristics of Oscillate frequency max	±0.3%
4.9	Operating Temp Range（℃）	-20 ~ +80
4.10	Storage Temp (℃)	-55 ~ +85

5. Test Circuit:



IC： 1/6TC4069UBE×2

V_{DD}： +5V±0.1V

R： 1MΩ

C_1, C_2： 30PF

6. Physical and Environmental Characteristics:

No	Item	Condition	Result
6-1	Terminal strength	Force of 1kg is applied to each lead in axial direction, keep for 10sec, then force of 0.5kg is applied to each lead in aerial direction. The lead shall be bend 90° degree in one direction, then in the opposite direction and return to normal.	Non-evident damage.
6-2	Resistance to soldering heat	Lead terminals are immersed up to 2.0mm of body in a solder bath (260±5℃), keep for 5±0.5sec, then return to normal temp. For 24±2hrs.	Non-evident damage and meet table-1, the mark is clear.
6-3	Thermal shock	Temp:-55~+85℃, 5cycles, keep for 30min, return to normal temp, for 24±2hrs.	Non-evident damage and meet table-1, the mark is clear.
	Vibration	Vibration:frequency:10~55Hz, amplitude:1.5mm, keep for 6hrs。	
	Shock	Va: 294m/s^2, pulse time: 18ms。	
6-4	High temperature	Temp: +85℃, keep for 16hrs.	Non-breakthrough, or arc and meet table-1, non-evident damage the mark is clear.
	Damp & heat (cyclic)	Trial Db, the first circle	
	Low temperature	Temp: -55℃, keep for 2hrs.	
	Low air pressure	Air press: 8.5kPa keep for 2hrs.	
	Damp & heat (cyclic)	Trial Db, the rest cycles, return to normal temp for 24±2hrs.	
6-5	Damp & heat (steady state)	Temp: 40±2℃, humidity: 90~95%. Keep for 500hrs, return to normal temp for 24±2hrs.	Non-evident damage, the mark is clear, meet table-1.
6-6	Life test	Temp:+85℃, keep for 1000hrs, return to normal temp for.	Meet table-1.

Table 1

No.	Test item	The value can be changed
1	Oscillate frequency max	±0.3%
2	Resonant impedance (Ω) max	±5
3	Insulate resistance (MΩ) min	100