SMD Ceramic Resonator

TGS Part Family No.: CRTS

Main Fetaure

- RoHS/RoHS Compliant
- SMD tpye
- Low cost and short lead time

4.7X4.1X1.6mm

Application

- Consumer Electronics
- Communications

RoHS

Standard Specification

Frequency Range:8.00~50.00MHz
Frequency Accuracy : ±0.5%
Temp. Stability At -20℃ ~+80℃: ±0.3%
Load Capacitance C1,C2: MT: 30pF (8.00 ~ 13.00MHz)
MX: 15pF (13.01~40.00MHz), 5pF (40.01~50.00MHz)
Operating Temp. Range: -20℃ ~+80℃
Storage Temp. Range:-40℃ ~+85℃
Equivalent Series Resistance(ESR): 25 ohm Max. 8.00 ~ 13.00MHz
40 ohm Max. 13.01 ~ 50.00MHz
Withstanding Voltage: 50V DC 1minute
Rating Voltage: D. C. Voltage: 6V. D. C.
A . C. Voltage: 15Vpp
Insulation Resistance : 100M ohm Min.(at 10V DC)
Aging (Over 10 years): ±0.5% ppm
Supply Voltage VDD: +5.0V

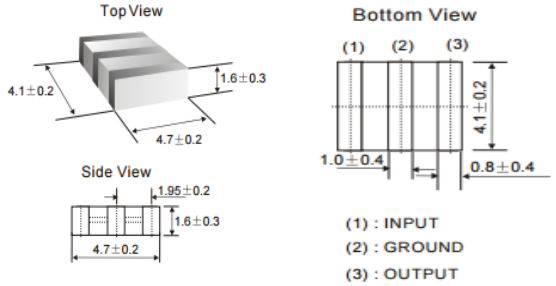
Design Mode: See Table 1

Table 1

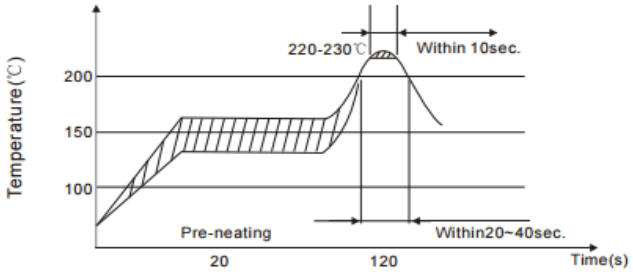
Design Mode	Freq. Range	Option Code
Thickness Expander Mode	8.000 ~ 13.0 MHz	T
Thickness Expander Mode (3rd Overtone)	13.01 ~ 50.0 MHz	X

*Specifications Subject to Change Without Notice
**Please specify frequency Range before order/Inquiry

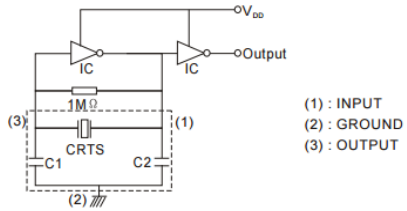
Dimension (Unit: mm)



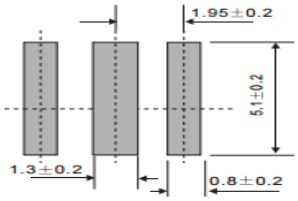
RECOMMENDED REFLOW SOLDERING STANDARD CONDITIONS



TEST CIRCUIT



RECOMMENDED LAND PATTERN (Unit: mm)



TGS part No. Guide

TGS	CR	T	S	12.0M	T	T
	1	2	3	4	5	6

1) CR: Ceramic Resonator 2) T: Without built-in Capacitance 3) S:Dimensions
4) 12.0M: Freq.Range 5) T: Design Mode 6)T: Tape/Reel (Package)