

Main Feature

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



4. 7X4. 1X1. 6mm

Application

- Consumer Electronics
- Communications



Standard Specification

Frequency Range: 8.00~50.00MHz
 Frequency Accuracy At 25°C : ±0.5%
 Temp. Stability At -20°C ~80°C : ±0.3%
 Load Capacitance C1,C2: MT:30pF
 MX:30pF (13.01~19.99MHz), 15pF (20.00~25.99MHz), 5pF (26.00~50.00MHz)
 Operating Temp. Range: -20°C ~+80°C
 Storage Temp. Range: -40°C ~+85°C
 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(Ω): 100M ohm Min. (at 10V DC)
 Aging (Over 10 years): ±0.5%ppm
 Supply Voltage VDD: +5.0V

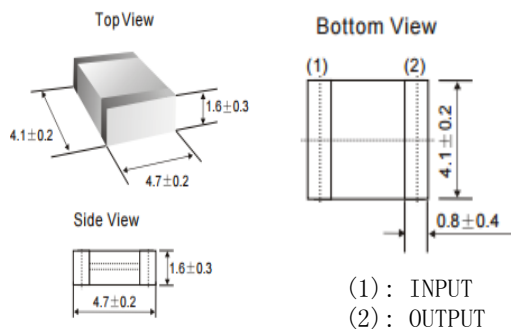
Design Mode: See Table 1

Table 1

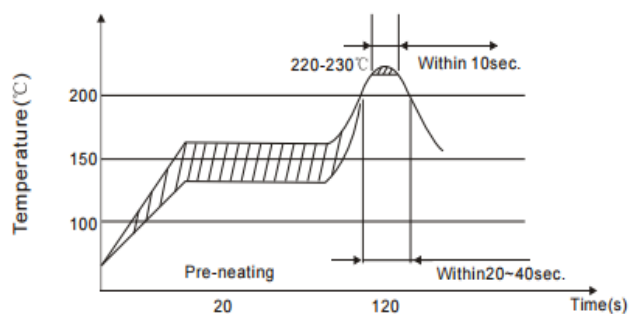
| Design Mode | Freq. Range | Option Code |
|--|------------------|-------------|
| Thickness Expander Mode | 8.000 ~ 13.0 MHz | T |
| Thickness Expander Mode (3rd Overtone) | 13.01 ~ 50.0 MHz | X |

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

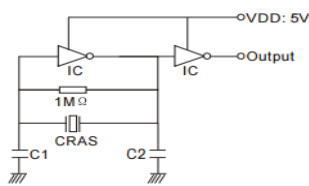
Dimension (Unit: mm)



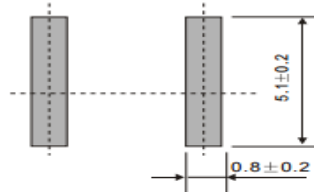
RECOMMENDED REFLOW SOLDERING STANDARD CONDITIONS



TEST CIRCUIT



RECOMMENDED LAND PATTERN (Unit: mm)



TGS part No. Guide

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

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