

Main Features

- RoHS compliant • Low Profile
- 4 PADS



Application

- Communication, Test equipment • Computers, Modems, Microprocessors

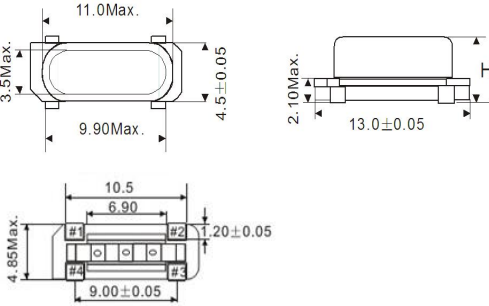
Standard Specification

Frequency Range: 3.2000MHz ~ 70.000Hz
 Frequency Tolerance (at 25°C): ±10 ~ ±50ppm
 Load Capacitance: 18pF (Typ.) or Specify
 Frequency Stability: ±10 ~ ±100ppm
 Operating Temperature: -20°C ~ +70°C and -40°C ~ +85°C
 Equivalent Series Resistant: see Table 1
 Storage Temperature: -55 °C ~ +125°C (typ.)
 Aging (at 25°C): ±5ppm Max.
 Shunt Capacitance (C0): 7.0pF Max.
 Drive Level: 100 μW Typ.
 Package: Tape/Reel

Standard ESR Table 1

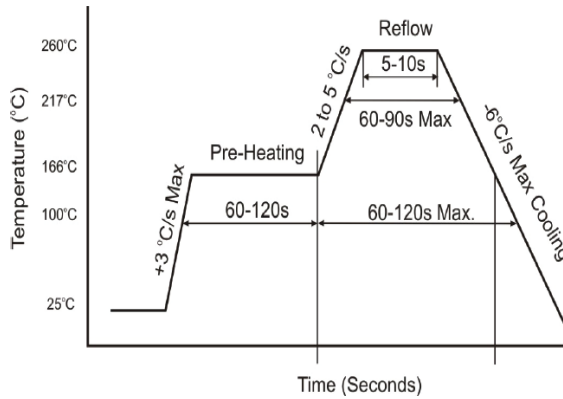
Frequency Range in MHz	ESR Value in Ohm Max.
3.2000~3.499 (Fund.)	300
3.5000~3.999 (Fund.)	200
4.0000~5.999 (Fund.)	150
6.0000~6.999 (Fund.)	100
7.0000~8.9990 (Fund.)	80
9.0000~12.999 (Fund.)	60
13.0000~19.999 (Fund.)	40
20.0000~26.999 (Fund.)	30
27.0000~70.000 (3rd OT)	100

Dimension (Unit: mm)

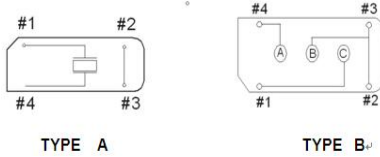


SM4:H=5.2 ± 0.2
 SSM4:H=4.2 ± 0.2

Reflow Profile Condition (260 °C Max.)



Electrode Arrangement



TGS part No. Guide

TGS	CSSM4A	12M0A	50-	18-	50-	40-	80	T	LF	XX
	1 2	3 4	5	6	7	8	9	10	11	12

- 1) CSSM4: TGS Part Family No.
- 2) Electrode arrangement : A:Type A, B: Type B
- 3) 12M0: Frequency Range in MHz or specify
- 3) Oscillator Mode-A: AT-Cut Fund; B: Bt-Cut; C: 3rd OT
- 5) 50: Frequency Tolerance in +/-50ppm or specify
- 6) 18: Load Capacitor in pF or specify
- 7) 50: Frequency Stability in +/-50 ppm or specify
- 8) 40: Operating Temp. in -40 °C ~ +85 °C or specify
- 9) 80: ESR Max. in 80 ohm or see table 1
- 10) T: Tape /Reel
- 11) LF: RoHS compliant
- 12) XX: 2 letters as Internal Control Code