

MAIN FEATURE

- Low Cost and short lead time
- Wide Frequency Range

APPLICATION

- PC, TV and all kind of consumer electronics products



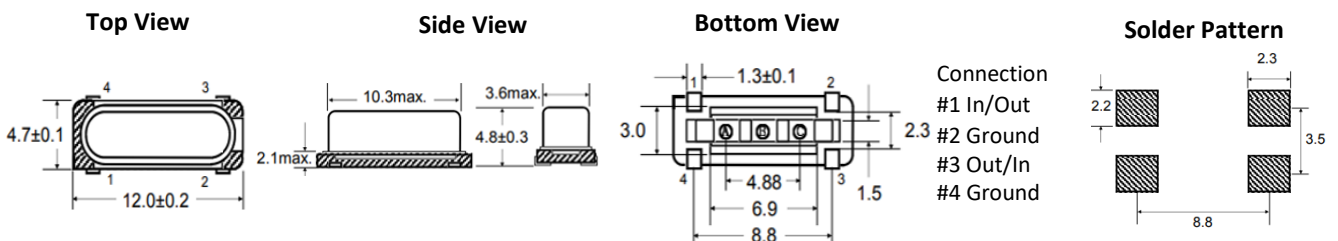
L12.0*W4.7*H4.8mm



STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	3.500		100.00	MHz	
Oscillation Mode	AT Fund.				3 RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@3.000 ~ 4.000MHz
			120		@4.001 ~ 6.000MHz
			80		@6.001 ~ 10.000MHz
			60		@10.001 ~ 54.000MHz
			80		@30.001 ~ 40.000MHz, 3 rd OT
			70		@40.001 ~ 100.00MHz, 3 rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

DIMENSION (mm)



PART NUMBER GUIDE

Example: TGS CSM4 4M0A50-18-50-40-150 TLF

[Part Number and Part Code Structure](#)

TGS	CSM4	4M0	A	50	-18	-50	-40	-150	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11	12

- 1) TGS: Company Code
- 2) CSM4: SMD Crystal, 4 pads, L12.0*W4.7*H4.8mm
- 3) 4M0: Frequency Range 4.000MHz or specify detail frequency range
- 4) A: Oscillation Mode, A: AT Fund. 3: 3rd Overtone
- 5) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify detail value
- 6) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify detail CL value
- 7) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify detail value
- 8) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify detail value
- 9) 150: Equivalent Series Resistance (ESR), 150: 150 ohm Max.
- 10) T: Package in Tape/Reel, 1000pcs/Reel
- 11) LF: RoHS Compliant
- 12) XX: Internal Control Code- 2 letter or digits ; Blank: N/A