

L2.5\*W2.0\*H0.75mm



**MAIN FEATURE**

- High reliable • Low Cost and short lead time • 4 Pads

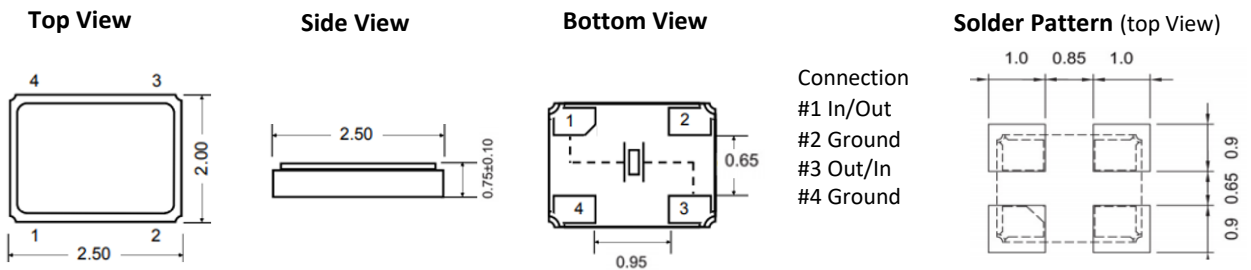
**APPLICATION**

- NB, DSC, USB and portable consumer electronics products

**STANDARD SPECIFICATION**

| Parameter                          | Value    |      |       | Unit      | Condition                       |
|------------------------------------|----------|------|-------|-----------|---------------------------------|
|                                    | Min.     | Type | Max.  |           |                                 |
| Frequency Range                    | 12.0     |      | 64.00 | MHz       |                                 |
| Oscillation Mode                   | AT Fund. |      |       |           | 3 <sup>RD</sup> 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) |          |      | 200   | ohm       | @12.000 ~ 13.00MHz              |
|                                    |          |      | 150   |           | @13.001 ~ 15.00MHz              |
|                                    |          |      | 120   |           | @15.001 ~ 17.00MHz              |
|                                    |          |      | 100   |           | @17.001 ~ 20.00MHz              |
|                                    |          |      | 80    |           | @20.001 ~ 27.00MHz              |
|                                    |          |      | 60    |           | @27.001 ~ 64.00MHz              |
| Drive Level                        | -        | -    | 100   | µW        |                                 |
| Shunt Capacitance                  | -        | -    | 7.0   | pF        |                                 |
| Insulation Resistance              | 500      | -    |       | mW        | DC/100V +-10%                   |
| Aging per year                     | -        | ±3   |       | ppm       | @25 °C                          |

**DIMENSION (mm)**



Connection  
 #1 In/Out  
 #2 Ground  
 #3 Out/In  
 #4 Ground

**PART NUMBER GUIDE** Example: TGS CMG22 16M0A50-18-50-40-120 TLH

**Part Number and Part Code Structure**

|     |       |      |   |    |     |     |     |      |    |    |    |
|-----|-------|------|---|----|-----|-----|-----|------|----|----|----|
| TGS | CMG22 | 16M0 | A | 50 | -18 | -50 | -40 | -120 | T  | LH | XX |
| 1   | 2     | 3    | 4 | 5  | 6   | 7   | 8   | 9    | 10 | 11 | 12 |

- 1) TGS: Company Code
- 2) CMG22: SMD Crystal Glass seal, 4 pads, L2.5\*W2.0\*H0.75mm
- 3) 16M0: Frequency Range 16.000MHz or specify detail frequency range
- 4) A: Oscillation Mode, A: AT Fund. 3: 3<sup>rd</sup> 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) 120: Equivalent Series Resistance (ESR), 120: 120 ohm Max.
- 10) T: Package in Tape/Reel, 1000pcs/Reel
- 11) LH: RoHS/RoHS II Compliant
- 12) XX: Internal Control Code- 2 letter or digits ; Blank: N/A

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