

**Main Feature**

- RoHS compliant
- Cross Ref. No. AB308 and more



8.3\*3.1mm

**Application**

- Communication, Test equipment
- Computers, Modems, Microprocessors
- Computer Clock and Industrial Application

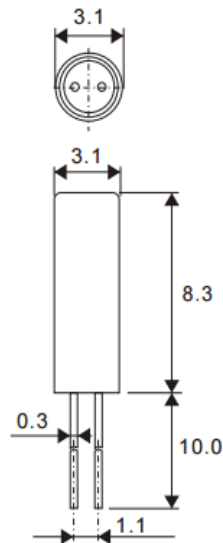
**Standard Specification**

Frequency Range: 4.001MHz ~ 70.0MHz  
 Frequency Tolerance (at 25°C): ±10~ ±50ppm  
 Load Capacitance: 18pF (Typ.) or Specify  
 Frequency Stability: ±10 ~ ±50ppm  
 Operating Temperature: -20°C~ +70°C and -40°C~ +85°C  
 Equivalent Series Resistant: see Table 1  
 Storage Temperature: -40 °C~ +85°C (typ.)  
 Aging (at 25°C): ±5ppm Max.  
 Shunt Capacitance (C0): 5.0pF Max.  
 Drive Level: 100µW Typ.  
 Package: in Bulk

**Standard ESR Table 1**

Frequency Range in MHz	ESR Value in KOhm Max.
4.001~5.999 (Fund.)	150
6.000~9.999(Fund.)	100
10.000~32.000(Fund.)	50
30.000~35.99(3rd OT)	100
36.00~80.00(3rd OT)	80

**Dimension ( Unit: mm)**



**TGS part No. Guide**

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

- 1) CCD: TGS Part Family No.
- 2) 12M0: Frequency Range in MHz or specify
- 3) Oscillator Mode- A: AT- Cut Fund. ; B: Bt-Cut; C: 3rd OT
- 4) 50: Frequency Tolerance in +/-50ppm or specify
- 5) 18: Load Capacitor in pF or specify
- 6) 50: Frequency Stability in +/-50 ppm or specify
- 7) 40: Operating Temp. in -40°C~ + 85°C or specify
- 8) 80: ESR Max. in 80 ohm or see table 1
- 9) B: In Bulk
- 10) LF: RoHS compliant
- 11) XX: 2 letters as Internal Control Code