

**SMD type ( 2 pads )**  
**12.4 x 4.5 x 4.0 mm**



RoHS Compliance

**Applications**

- High frequency fundamental mode is available in BT-cut
- Withstands solder reflow and is available in EIA-481A tape and reel .
- AT-strip crystal inside. Optimized for low spurious.

General Specifications	
Parameters	Electrical Spec.
Item / Type	<b>M49</b> ( 12.4 * 4.5 * 4.0 mm )
Frequency Range & Crystal Cut	3.2.000 ~ 48.000 MHz , AT-cut , Fundamental Mode ( see Table 1 ) 27.000 ~ 70.000 MHz , AT-cut , 3rd overtone ( see Table 1 ) 24.000 ~ 48.000 MHz , BT-cut , Fundamental Mode ( see Table 1 )
Load Capacitance	Series or Parallel ( 8 to 32 pF ) resonance
Drive Level	100μ W typical ( 500μ W max. )
Frequency Tolerance	± 5 ppm , ± 10 ppm , ± 20 ppm or ± 30 ppm at 25°C
Frequency Stability	See Table 2
Aging	ΔF / F : ±3 ppm / year ( max. )
Storage Temperature Range	- 50°C to 105°C

Table 1

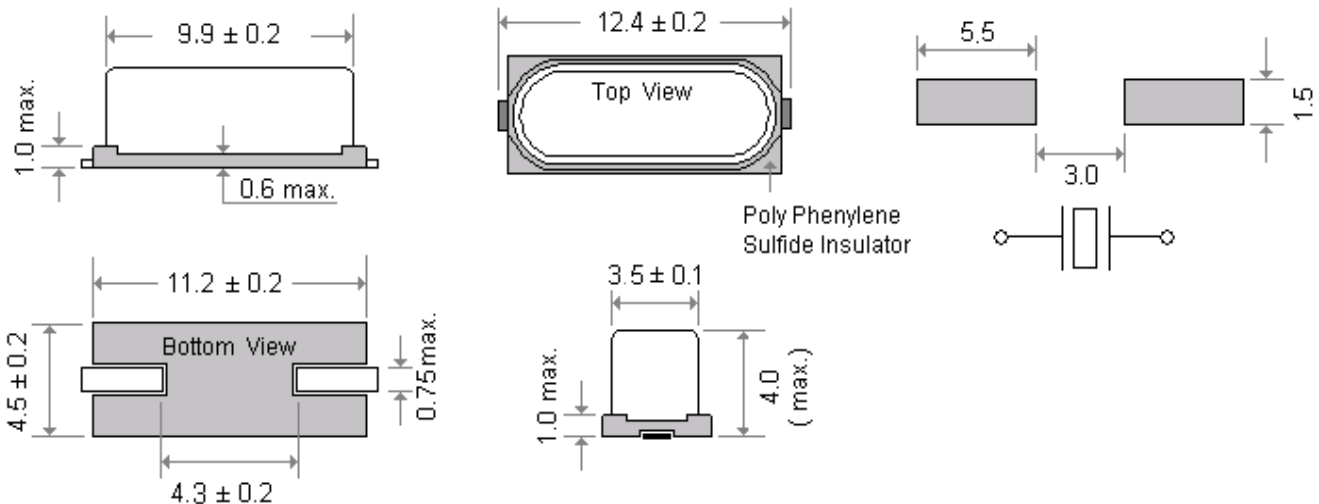
ESR ( Equivalent Series Resistance )					
Freq. (MHz)	Osc. Mode	E.S.R.	Freq.(MHz)	Osc. Mode	E.S.R.
3.2 ~ 3.4	AT , Fund.	300 Ω	27.0 ~ 30.0	AT , 3rd	150 Ω
3.5 ~ 6.0	AT , Fund.	120 Ω	30.1 ~ 50.0	AT , 3rd	100 Ω
6.1 ~ 10.0	AT , Fund.	60 Ω	50.1 ~ 70.0	AT , 3rd	80 Ω
10.1 ~ 30.0	AT , Fund.	40 Ω			

Table 2

Frequency stability Vs Operating temperature range						
Stability code	Temp. (°C) \ ppm	± 10	± 15	± 20	± 25	± 30
X	-10 to 60°C	○	○	○	○	○
Y	-20 to 70°C	▲	○	○	○	○
I	-40 to 85°C		○	○	○	○

○ : available ; ▲ : contact Mercury

**General Specifications ( Unit : mm )**



**Mercury** [www.mercury-crystal.com](http://www.mercury-crystal.com)