

Quartz Crystals

M49G

[12.4 * 4.5 * 4.0 mm]

ML49G

[12.4 * 4.5 * 3.0 mm]

Surface Mount Crystals

Fundamental

3rd Overtone

Min.

3.2 MHz

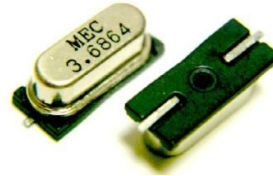
Max.

70 MHz

Features

Specifications

- Withstands solder reflow and available in EIA-481A tape and reel
- AT-strip crystal inside. Optimized for low spurious.
- Lowest cost among all Mercury SMD crystals



RoHS Compliance

General Specifications

Item / Type	M49 (12.4 * 4.5 * 4.0mm) series	ML49 (12.4 * 4.5 * 3.0mm) series
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)	
Load Capacitance	Series or Parallel (8 to 32 pF) resonance	
Drive Level	100μ W typical (500μ W max.)	
Frequency Tolerance	± 10 ppm , ± 20 ppm or ± 30 ppm (max.) at 25°C	
Frequency Stability	See Table 2	
Aging	$\Delta F / F : \pm 3 \text{ ppm / year (max.)}$	
Storage Temperature Range	- 50°C to 105°C	

Table 1

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

Outline Dimensions (Unit : mm)

