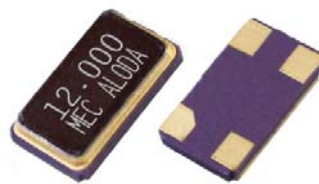


**SMD type**  
**5.0 x 3.2 x 0.8 mm**



**Applications**

- The entire package can be grounded via the top metal lid and the two bottom pads .
- Frequency tolerance as tight as +/-5ppm is available.

**General Specifications**

Parameters	Electrical Spec.
Item / Type	<b>MJ series ( 5.0 * 3.2 * 0.8 mm )</b>
Frequency Range & Crystal Cut	8.000 ~ 50.000 MHz , AT-cut , Fundamental Mode ( see Table 1 ) 40.000 ~ 200.000 MHz , AT-cut , 3rd overtone ( see Table 1 )  NOTE : Frequencies between 40 and 50 MHz can be either AT fundamental or AT 3rd overtone. Please add " AF " after the frequency on the part number for an AT-cut fundamental mode crystal and " A3 " for an AT-Cut 3rd overtone crystal. For example: MJ-40.000AF-20P.
Load Capacitance	Series or Parallel ( 8 to 32 pF ) resonance
Drive Level	10μ W typical ( 100μ 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

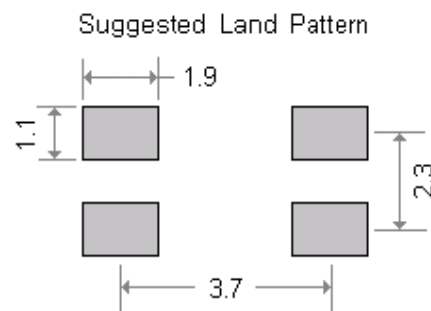
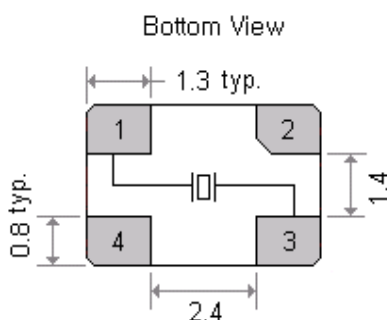
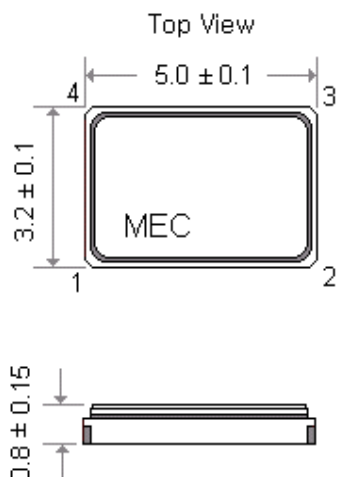
ESR ( Equivalent Series Resistance )		
Frequency Range	Oscillator Mode	E. S. R.
8.000 ~ 10.000 MHz	AT-Cut , Fund. Mode	80 Ω max
10.100 ~ 50.000 MHz	AT-Cut , Fund. Mode	50 Ω max
40.000 ~ 200.000 MHz	AT-Cut , 3rd Overtone	80 Ω max

Table 2

Frequency stability vs Operating temperature range							
Stability code	Temp. (°C) \ ppm	± 5	± 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 )**



Pad connections :  
Pad 1 and 3 : Crystal  
Pad 2 and 4 : Connected through the metal lid for grounding  
Chamfered pad is pad No. 2