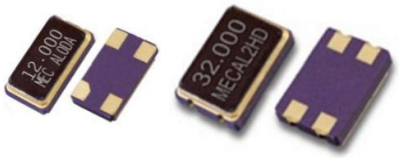
Quartz Crystals

X42	MJ	MF	MQ	Surface Mount	X42 , MJ , MF , MQ	MJ , MQ
4.0 * 2.5 * 0.7 mm	5.0 * 3.2 * 0.9 mm	6.0 * 3.5 * 1.0 mm	7.0 * 5.0 * 1.0 mm		Fundamental	3rd Overtone

Features

Specifications

- Exhibits extremely low aging with a high shock and vibration resistance
- The entire package can be grounded via the top metal lid and the two bottom pads
- This low 0.6mm package height is ideal for height constrained applications



RoHS Compliance

General Specifications

Item / Type	**X42** series	**MJ** series	**MF** series	**MQ** series
Package Dimensions	(4.0 * 2.5 * 0.8 mm)	(5.0 * 3.2 * 0.10 mm)	(6.0 * 3.5 * 1.1 mm)	(7.0 * 5.0 * 1.1 mm)
Frequency Range	12.0 ~ 54.0 MHz (Fund.)	8.0 ~ 52.0 MHz (Fund.)	8.0 ~ 50.0 MHz (Fund.)	6.0 ~ 50.0 MHz (Fund.)
	40.0 ~ 200.0 MHz (3rd)	40.0 ~ 125.0 MHz (3rd)	40.0 ~ 125.0 MHz (3rd)	40.0 ~ 200.0 MHz (3rd)
Crystal Cut	AT - Cut ; 3rd overtone			
Load Capacitance	Series or Parallel (8 to 32 pF) resonance			
Drive Level	10 μ W typical (100μ W max.)			
Frequency Tolerance	± 10 ppm , ± 20 ppm or ± 30 ppm (max.) at 25°C			
Aging	△F / F : ± 3 ppm / year (max.)			
Storage Temp. Range	- 50°C to 105°C			

ESR (Equivalent Series Resistance)

X42		
Freq. (MHz)	E.S.R.	Mode
12.0 ~ 14.9 MHz	80 Ω	Fund.
15.0 ~ 29.9 MHz	50 Ω	
30.0 ~ 54.0 MHz	40 Ω	

MJ		
Freq. (MHz)	E.S.R.	Mode
8.0 ~ 9.9 MHz	150 Ω	Fund.
10.0 ~ 14.9 MHz	80 Ω	
15.0 ~ 19.9 MHz	50 Ω	
20.0 ~ 52.0 MHz	40 Ω	
40.0 ~ 200.0 MHz	80 Ω	3rd

MF		
Freq. (MHz)	E.S.R.	Mode
8.0 ~ 11.9	80 Ω	Fund.
12.0 ~ 15.9	60 Ω	
16.0 ~ 50.0	40 Ω	

MQ		
Freq. (MHz)	E.S.R.	Mode
6.0 ~ 8.0	80 Ω	Fund.
8.1 ~ 11.0	60 Ω	
11.1 ~ 14.0	50 Ω	
14.1 ~ 50.0	40 Ω	
40.1 ~ 50.0	80 Ω	3rd
50.1 ~ 200.0	90 Ω	

Frequency stability Vs Operating temperature range

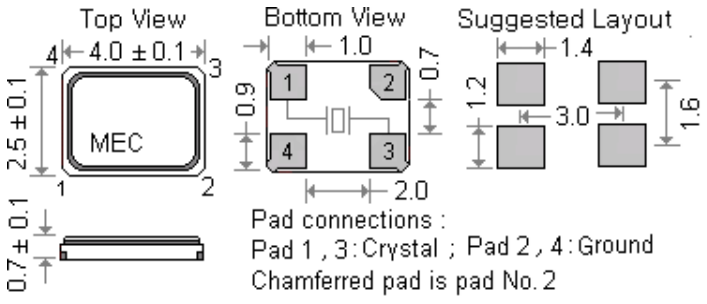
Frequency stability vs Operating temperature range							
Stability code	Temp. (ºC) \ ppm	± 5	± 10	± 15	± 20	± 25	± 30
X	-10 to 60°C	○	○	○	○	○	○
Y	-20 to 70°C	▲	○	○	○	○	○
I	-40 to 85°C			○	○	○	○

○ : available

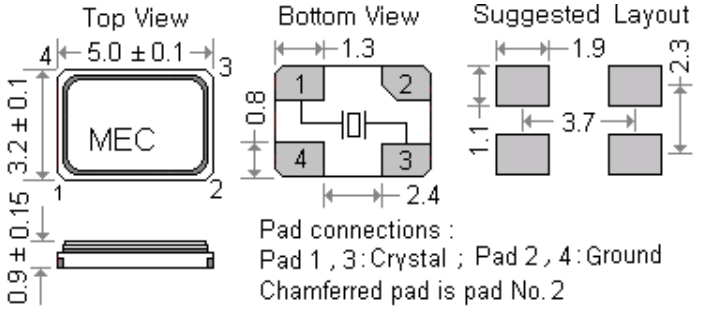
▲ : contact Mercury

Outline Dimensions (Unit : mm)

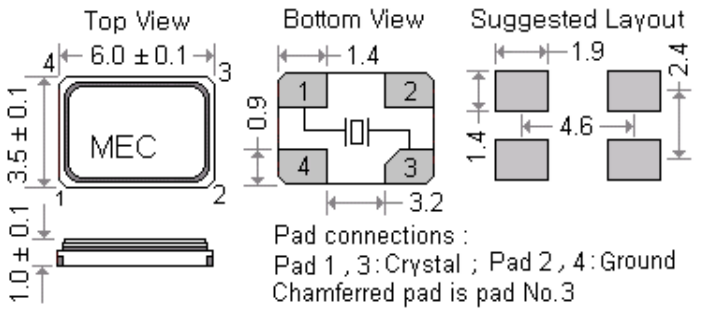
X42



MJ



MF



MQ