

5 x 3.2 x 0.9mm SMD

7.0MHz to 125MHz

FEATURES

- Miniature size: 5.0mm x 3.2mm x 1.0mm height
- Gold-plated ceramic base with metal seam-welded lid
- To minimize EMI the whole crystal may be grounded
- High shock and vibration resistance
- Ideal for PDAs, GPS, PCMCIA, Wirless LAN etc.

DESCRIPTION

MJ crystals are miniature surface-mount crystals produced with a ceramic substrate and seam-welded metal lid. Their compact size and low mass make hem an ideal crystal for high-density applications.

SPECIFICATION

Frequency Range:

7.0MHz to 50.0MHz AT-Cut Fundamental: AT-Cut 3rd Overtone: 40.0MHz to 125.0MHz

Calibration Tolerance at 25°C: from ±5ppm

 $(\pm 10, \pm 20 \text{ or } \pm 30 \text{ppm standard})$

Frequency stability -10° to +60°C from ±5ppm -20° to +70°C from ±10ppm -40° to +85°C from ±15ppm -50°~+105°C Storage Temperature:

Effective Series Resistance and Mode

7.0MHz to 50.0MHz: 50Ω max., AT-Cut Fundamental 40.0MHz to 125.0MHz: 80Ω max., AT-Cut 3rd Overtone

Operating Temperature Range: from $0^{\circ} \sim +50^{\circ}C$ to $-55^{\circ} \sim +105^{\circ}$

Shunt Capacitance (C0): 2pF to 4pF typical, 5pF maximum Load Capacitance (CL): Series or from 10pF to 32pF

(Customer specified CL) <±3ppm per year at +25°C Drive level: 100 μW maximum 10s maximum at 260°C twice Reflow Soldering: or 180s at 230°C, once.

Package: Ceramic base, metal (Kovar) lid,

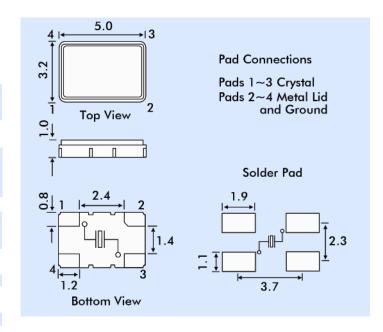
Hermetic seal

12mm EIA tape and reel Packaging: 1000 pieces per reel



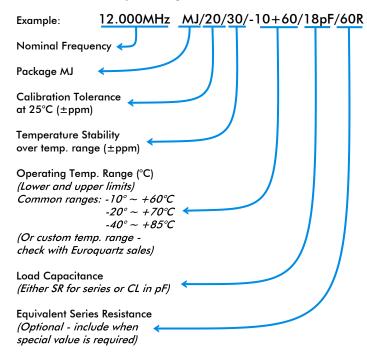


OUTLINE & DIMENSIONS



PART NUMBER GENERATION

Part numbers for MJ crystals are generated as follows:



ENVIRONMENTAL SPECIFICATION

RoHS Status:	Compliant
Gross Leak:	1kg pressurized water immersion test as per Euroquartz procedures.
Fine Leak:	<5x10-8 atm cc/s -helium leak test
Shock:	±5ppm max. Free drop 3 times from 75cm height onto a hard wooden board or half sine wave acceleration of 100g peak amplitude for 11 ms duration, 3 cycles each plane.
Vibration:	±5ppm max., frequency 10 to 55Hz, amplitude 1.5mm or 10g rms. Duration 6 hours.
Solderability:	MIL-STD-883, Method 2003
Humidity:	48 hours at 85°C, relative humidity, non-condensing
Thermal Shock:	Temperature cycling: Exposed to -40°C for 30 minutes then to +85°C for 30 minutes, - duration 5 days.