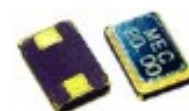


FEATURES

- Miniature size: 5.0mm x 3.2mm x 1.0mm height
- 2 pad version
- 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 them an ideal crystal for high-density applications.

SPECIFICATION

Frequency Range:	7.0MHz to 50.0MHz
Mode:	AT-Cut Fundamental
Calibration Tolerance at 25°C:	from ±5ppm (±10, ±20 or ±30ppm standard)
Frequency stability	
-10° to +60°C	from ±5ppm
-20° to +70°C	from ±10ppm
-40° to +90°C	from ±15ppm
Storage Temperature:	-50°~+105°C
Effective Series Resistance:	See table
Shunt Capacitance (C0):	2pF to 4pF typical, 5pF maximum
Load Capacitance (CL):	Series or from 10pF to 32pF (Customer specified CL)
Ageing:	<±3ppm per year at +25°C
Drive level:	100 µW maximum
Reflow Soldering:	10s maximum at 260°C twice or 180s at 230°C, once.
Package:	Ceramic base, metal lid, Hermetic seal
Packaging:	12mm EIA tape and reel 1000 pieces per reel

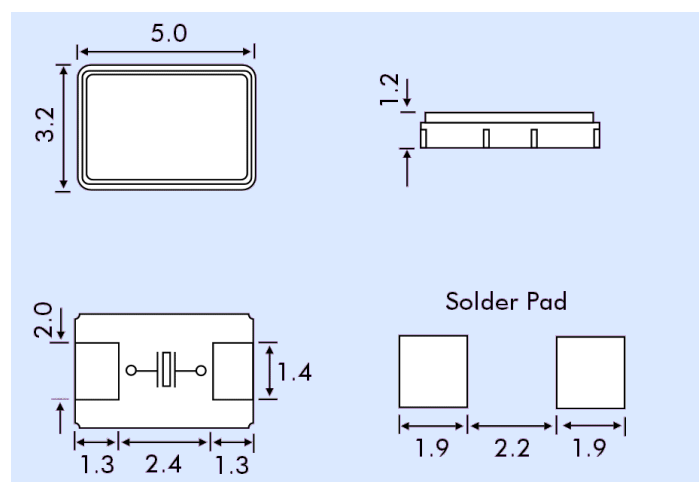
EQUIVALENT SERIES RESISTANCE (ESR)

Frequency Range MHz	Crystal Cut/ Mode	ESR Ω Max.
7.0 ~ 12.0	AT Fund.	80
12.0 ~ 16.0	AT Fund.	60
16.01 ~ 48.0	AT Fund.	50

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.

OUTLINE & DIMENSIONS



PART NUMBER GENERATION

Part numbers for MJ2 crystals are generated as follows:

