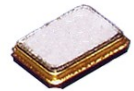


- **Miniature size: 5.0mm x 3.2mm x 1.0mm height**
- **Gold-plated ceramic base with metal seam-welded lid**
- **To minimize EMI the whole crystal may be grounded**
- **High shock and vibration resistance**
- **Ideal for PDAs, GPS, PCMCIA, Wireless LAN etc.**



## 5 x 3.2 x 1.0mm SMD



### 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 MJ crystals ideal for high-density applications.

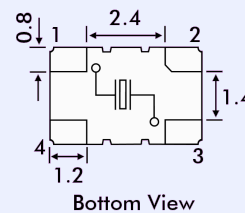
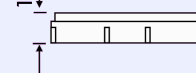
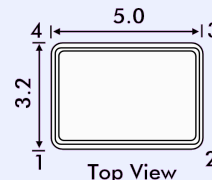
### SPECIFICATION

<b>Frequency Range:</b>	
AT-Cut Fundamental:	10.0MHz to 50.0MHz
AT-Cut 3rd overtone:	40.0MHz to 125.0MHz
<b>Calibration Tolerance at 25°C:</b>	from $\pm 5$ , $\pm 10$ , $\pm 20$ ppm ( $\pm 30$ ppm standard)
<b>Frequency stability</b>	
-10° to +60°C	from $\pm 5$ ppm
-20° to +70°C	from $\pm 10$ ppm
-40° to +85°C	from $\pm 15$ ppm
<b>Storage Temperature:</b>	-50°~+105°C
<b>Equivalent Series Resistance:</b>	See table
<b>Shunt Capacitance (C0):</b>	2pF to 4pF typical, 5pF maximum
<b>Load Capacitance (CL):</b>	Series or from 10pF to 32pF (Customer specified CL)
<b>Ageing:</b>	< $\pm 3$ ppm per year at +25°C
<b>Drive level:</b>	100 $\mu$ W maximum, 10 $\mu$ W typical
<b>Reflow Soldering:</b>	10s maximum at 260°C twice or 180s at 230°C, once.
<b>Package:</b>	Ceramic base, metal (Kovar) lid, Hermetic seal
<b>Packaging:</b>	EIA tape and reel 1000 pieces per reel
<b>RoHS Status:</b>	RoHS Compliant and pB free

### EQUIVALENT SERIES RESISTANCE

Frequency Range MHz	Mode	ESR $\Omega$ max.
10.0 ~ 50.0	AT-Cut Fundamental	50
40.0 ~ 125.0	AT-Cut 3rd overtone	80

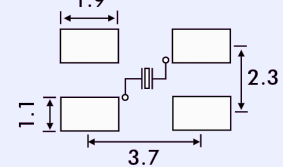
### OUTLINE & DIMENSIONS



#### Pad Connections

Pads 1~3 Crystal  
Pads 2~4 Metal Lid  
and Ground

#### Solder Pad



### PART NUMBER FORMAT

