

A miniature, ultra thin ceramic smd crystal available over the frequency range of 11MHz to 80MHz.

The established industry standard package for volume applications combining small size, high frequency and tight tolerance over an extended temperature range.

12 mm tape and reel packaging for automated assembly; 1000, 2000, 3000 or 5000 pieces per reel or bulk packed.

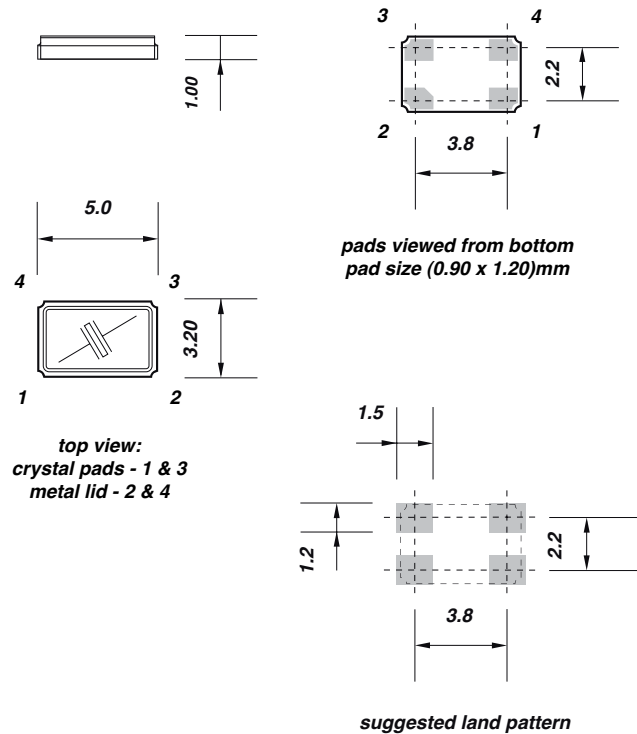
Applications include; Bluetooth, GPS, Display, TV(FPD-FTF-LCD) computer peripherals.

Custom specified with typical data as follows:

Specification data:

Environment	dry nitrogen
Quartz orientation	AT cut
Frequency range	(11 ~ 53.12)MHz fundamental (53.12 ~ 80)MHz 3rd overtone esr 65Ω max. (11 ~ 12)MHz esr 60Ω max. (12 ~ 13)MHz esr 55Ω max. (13 ~ 16)MHz esr 50Ω max. (16 ~ 24)MHz esr 40Ω max. (24 ~ 48)MHz esr 45Ω max. (48 ~ 53.12)MHz esr 60Ω max. >80.0MHz
Adjustment tolerance	from ±10ppm at ref. temp. frequency dependent
Operating temperature	(-10 +60)°C, (-20 +70)°C, (-40 +80)°C, custom specified
Storage temperature	(-40 +85)°C
Load	custom specified
Shunt capacitance	7pF max.
Suggested drive level	(10 ~ 100)μW
Ageing	±1ppm typical, first year max.
Insulation resistance	500Meg. Ω min. at 100Vd.c.

Dimensions(mm)



top view:
crystal pads - 1 & 3
metal lid - 2 & 4

pads are gold 2.5μ min. over nickel, suitable for vapour phase or reflow soldering, preheat +150°C for 2 minutes, peak temperature +250°C for 30 seconds max.

Frequency stability vs temperature range:

stability	temperature range		
	(-10 +60)°C	(-20 +70)°C	(-40 +85)°C
±5ppm	(-10 +60)°C		
±10ppm	(-10 +60)°C	(-20 +70)°C	
±15ppm	(-10 +60)°C	(-20 +70)°C	(-40 +85)°C
±20ppm	(-10 +60)°C	(-20 +70)°C	(-40 +85)°C