

- Frequency range 20MHz to 54MHz, fundamental mode
- Ultra-miniature package 2.05 x 1.65 x 0.6mm
- Packaged in standard EIA tape and reel
- Ideal for PDAs, hand-held GPS, PCMCIA etc.
- Extremely low ageing and shock & vibration resistance

DESCRIPTION

X21 crystals are ultra-miniature AT-cut crystals covering the frequency range 20.0MHz to 54.0MHz in fundamental mode. The X21 crystal package is grounded via the top metal lid and two solder pads. The part exhibits very low ageing and has high shock and vibration resistance. The small size and low mass makes these crystals ideal for miniaturized hand-held equipment and similar high-density applications.

SPECIFICATION

Frequency Range	
AT-Cut Fundamental:	20.0MHz to 54.0MHz
Calibration Tolerance at 25°C:	±10ppm, ±20ppm, ±30ppm
Frequency stability	
-10° to +60°C	from ±5ppm
-20° to +70°C	from ±10ppm
-40° to +85°C	from ±15ppm
Storage Temperature:	-50°~+105°C
Equivalent Series Resistance:	See table
Shunt Capacitance (C0):	2pF to 4pF typical, 5pF maximum
Load Capacitance (CL):	Series or from 8pF to 32pF
Ageing:	<±3ppm per year at +25°C
Drive level:	10μW typical, 100μW max.
Reflow Soldering:	10s maximum at 260°C twice or once 180s at 230°C.
Packaging:	EIA tape and reel

FREQUENCY STABILITY vs. OPERATING TEMPERATURE RANGE

Stability Code	Temperature Range	Stability 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

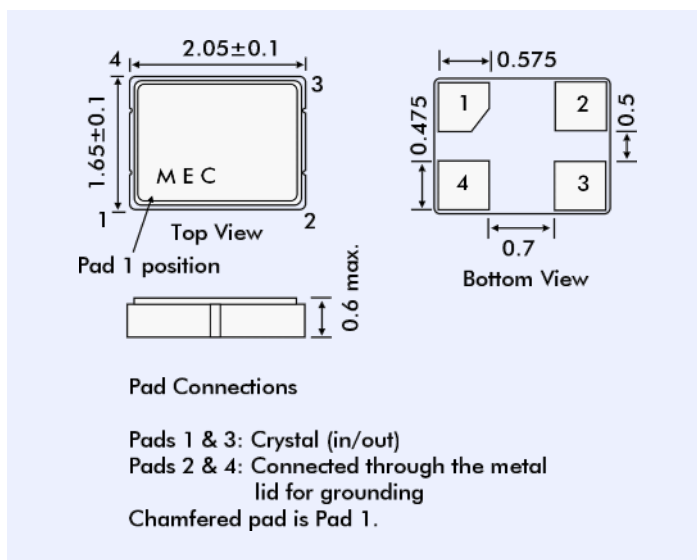
EQUIVALENT SERIES RESISTANCE

Frequency Range MHz	ESR Ohms Max.
20.0~30.0	120
30.1~54.0	80

2.05 x 1.65 x 0.6mm SMD



OUTLINE & DIMENSIONS



PART NUMBER FORMAT

