

- ▶ Compact and low profile
- ▶ Extended Temp Range Option
- ▶ RoHS Compliant
- ▶ 2 Pad Option

# ECX-53

## SMD QUARTZ CRYSTAL

The ECX-53B is a miniature SMD Crystal with a 3.2 x 5 mm footprint. This package is ideal for today's compact wireless applications where board space is critical.

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-53			UNITS
		MIN	TYP	MAX	
Frequency Range		8.000		150.000	MHz
Frequency Tolerance	at +25°C			± 30 *	ppm
Frequency Stability	-10 to +70°C			± 50 *	ppm
Shunt Capacitance				5	pF
Load Capacitance	Specify in P/N	10	20	Series	pF
Drive Level				100	µW
Operating Temperature		-10		+70	°C
Storage Temperature		-55		+125	°C
Aging (Per Year)	@ +25°C ±3°C			±5	ppm

### EQUIVALENT SERIES RESISTANCE/MODE OF OSCILLATION

FREQUENCY RANGE (MHz)	MODE OF OSC	MAX ESR Ω	FREQUENCY RANGE (MHz)	MODE OF OSC	MAX ESR Ω
8.00 ~ 9.999	Fundamental	100	20.000 ~ 23.999	Fundamental	40
10.000 ~ 15.999	Fundamental	80	24.000 ~ 50.000	Fundamental	30
16.000 ~ 19.999	Fundamental	50	50.100 ~ 150.000	3rd Overtone	80

### DIMENSIONS (mm)

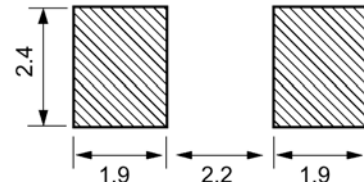
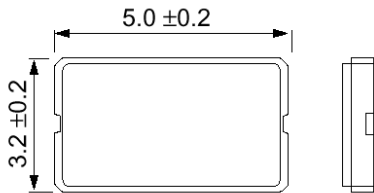


Figure 1) Top, Side, Bottom and End views

Figure 2) Suggested Land Pattern

### PART NUMBERING GUIDE: Example ECS-200-20-30-TR

ECS - Frequency Abbreviation - Load Capacitance - Package

200 = 20.000 MHz  
See P/N Guide

20 = 20 pF  
S=Series

30 =  
ECX-53

Custom Options			
Tolerance	* Stability	Temp Range	Packaging
Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm	Blank = Std D = ± 100 ppm E = ± 50 ppm G = ± 30 ppm H = ± 25 ppm T = ± 20 ppm W = ± 15 ppm K = ± 10 ppm	Blank = Std M = -20 ~ +70°C N = -40 ~ +85°C P = -40 ~ +105°C S = -40 ~ +125°C U = -55 ~ +125°C	TR= Tape & Reel 1K/Reel

\*Consult Factory for available stability options over extended temp range.

Rev 8/11

# Mouser Electronics

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