



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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- ▶ Low profile
- ▶ 4.0 x 2.5 mm Footprint
- ▶ Extended Temp Range Option
- ▶ RoHS Compliant



# ECX-42

## SMD QUARTZ CRYSTAL

The miniature ECX-42 is a compact SMD Crystal. The 4.0 x 2.5 x 0.8 mm ceramic package is ideal for today's SMD manufacturing environment.

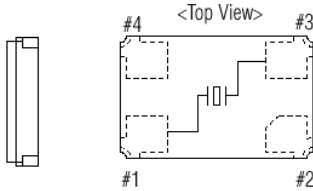
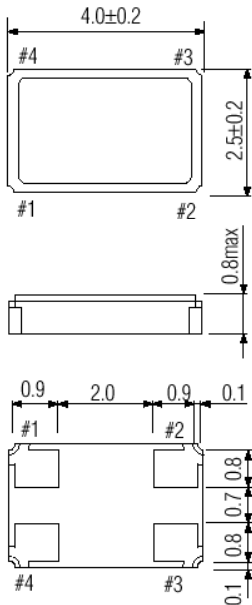
### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-42			UNITS
		MIN	TYP	MAX	
Frequency Range		12.000		50.000	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		12		pF
Drive Level				300	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
12.00 ~ 15.999	Fundamental	80	20.000 ~ 23.999	Fundamental	50
16.000 ~ 19.999	Fundamental	60	24.000 ~ 50.000	Fundamental	40

### DIMENSIONS (mm)



Pad Connections	
1	In/Out
2	Gnd
3	Out/In
4	Gnd

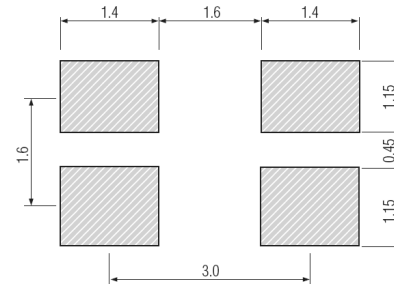


Figure 2) Suggested Land Pattern

Figure 1) Top, Side, Bottom and End views

### PART NUMBERING GUIDE: Example ECS-200-20-42-TR

ECS - Frequency Abbreviation - Load Capacitance - Package

200 = 20.000 MHz  
See P/N Guide

20 = 20 pF  
S=Series

42 =  
ECX-42

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.