



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
- ▶ Industry Standard Footprint
- ▶ Extended Temp. Range Option
- ▶ RoHS Compliant

ECX-3SX

SMD QUARTZ CRYSTAL

The wide frequency range SMD quartz crystal is an excellent choice for surface mount applications. The ruggedized moulded package is made from the same thermoplastic that is an industry standard for integrated circuits.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-3SX			UNITS
		MIN	TYP	MAX	
Frequency	Fo	3.570		70.000	MHz
Frequency Tolerance	@ +25°C			± 30 *	ppm
Frequency Stability (ref @ 25°C)	-10 ~ +70°C			± 50 *	ppm
Shunt Capacitance				7.0	pF
Load Capacitance	Specify in P/N		20		pF
Drive Level				100	µW
Operating Temperature	Topr	-10		+70	°C
Storage Temperature	Tstg	-40		+85	°C
Aging Characteristics (Per Year)	@ +25°C ± 3°C			± 5	ppm
Equivalent Series Resistance/ Mode of Oscillation	3.57 ~ 3.999 MHz (Fund)			200	Ω
	4.00 ~ 5.999 MHz (Fund)			150	Ω
	6.00 ~ 9.999 MHz (Fund)			100	Ω
	10.00 ~ 35.999 MHz (Fund)			50	Ω
	27.00 ~ 70.00 MHz (3rd OT)			100	Ω

PACKAGE DIMENSIONS (mm)

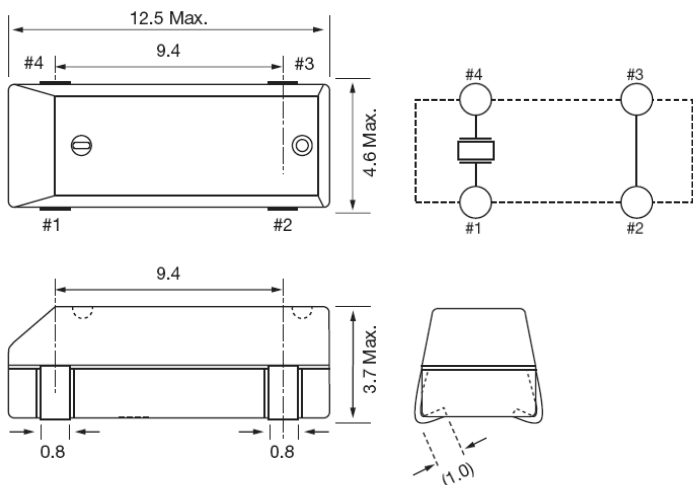


Figure 1) Top, Side and End Views

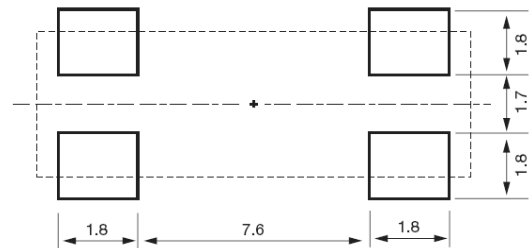


Figure 2) Suggested Land Pattern

PART NUMBERING GUIDE: Example ECS-160-20-7SX-TR

ECS	- Frequency Abbreviation -	Load	- Package Type	- Tolerance	- Stability	- Temp Range	- Packaging
160	= 16.000 MHz See P/N Guide for Std Frequencies	20 = 20.0 pF S = Series	-7SX = ECX-3SX	A = ± 25 ppm C = ± 10 ppm	D = ± 100 ppm E = ± 50 ppm G = ± 30 ppm H = ± 25 ppm K = ± 10 ppm	L = -10 ~ +70°C M = -20 ~ +70°C N = -40 ~ +85°C P = -40 ~ +105°C	-TR = Tape & Reel 1K/Reel

* Tighter Tolerance/Stability Options Available (see custom options)
Not all stabilities are available at all temp ranges, consult ECS.