

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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- -55 to +125°C Temp Range5 x 3.2 mm Footprint
- Pb Free/RoHS Compliant

# ECX-53B-DU SMD CRYSTAL

### **OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS**

PARAMETERS	CONDITIONS	E	CX-53B-	DU	UNITS	
		MIN	TYP	MAX		
Frequency Range		10.000		150.000	MHz	
Frequency Tolerance	at +25°C			± 30	ppm	
Frequency Stability	-55 to +125°C			± 100	ppm	
Shunt Capacitance				5	pF	
Load Capacitance	Specify in P/N	8	20	Series	pF	
Drive Level				300	μW	
Operating Temperature		-55		+125	°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 $\Omega$	FREQUENCY RANGE (MHz)	MODE OF OSC	MAX ESR $\Omega$
10.000 ~ 15.999	Fundamental	80	24.000 ~ 50.000	Fundamental	30
16.000 ~ 19.999	Fundamental	60	50.100 ~ 59.999	3rd Overtone	100
20.000 ~ 23.999	Fundamental	40	60.000 ~ 150.000	3rd Overtone	80

## **DIMENSIONS (mm)**

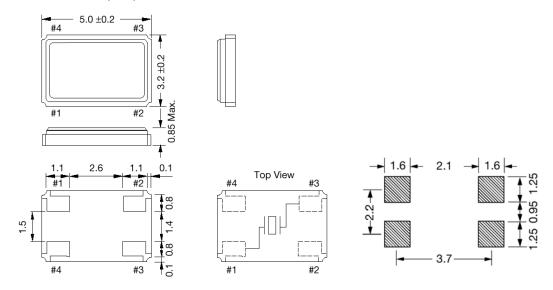


Figure 1) Top, Side, Bottom and End views

Figure 2) Suggested Land Pattern

#### PART NUMBERING GUIDE: Example ECS-200-20-30B-DU

ECS - Frequency Abbreviation - Load Capacitance - Package - Stability Temperature

200 = 20.000 MHz See P/N Guide 20 =20 pF S=Series 30B = ECX-53B

D= ± 100 ppm

U= -55 ~ +125°C