

The ultra-miniature ECX-31 is a very compact SMD Tuning Fork Crystal. The 3.2 x 1.2 x 1 mm package is ideal for applications where real estate is at a premium.

### FEATURES

- Low profile
- long term stability
- 1mm height max.
- Tape and Reel (3,000 pcs)

# Discontinued

Replacement part ECX-31B

### PART NUMBERING GUIDE "EXAMPLE"

MANUFACTURER	FREQUENCY (32.768 KHz)	LOAD CAPACITANCE	PACKAGE TYPE
ECS	- .327	- 12.5	- 32

Part Number: ECS-.327-12.5-32

### OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
FREQUENCY	F <sub>o</sub>		32.768		KHz
FREQUENCY TOLERANCE	Δf/f <sub>o</sub>			±20	PPM
LOAD CAPACITANCE			12.5		pF
DRIVE LEVEL	D <sub>L</sub>			1.0	μW
EQUIVALENT SERIES RESISTANCE	R <sub>L</sub>			50K	Ω
TURNOVER TEMPERATURE		+20	+25	+30	°C
TEMPERATURE COEFFICIENT	β		-0.035	-0.043	ppm/°C <sup>2</sup>
SHUNT CAPACITANCE	C <sub>0</sub>		1.7		pF
OPERATING TEMPERATURE RANGE	T <sub>OPR</sub>	-40		+85	°C
STORAGE TEMPERATURE RANGE	T <sub>STG</sub>	-55		+125	°C
INSULATION RESISTANCE	@ 100v DC ±15v	500M			Ω

### PACKAGE DIMENSIONS (mm)

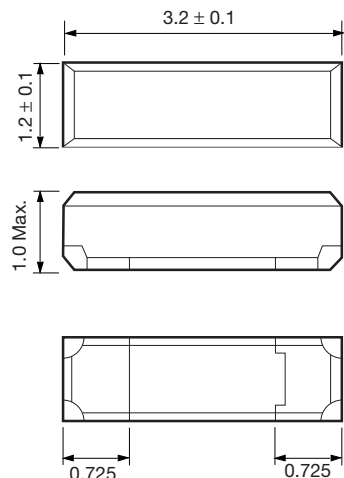


Figure 1) ECX-32 - Top, Side Bottom & End views

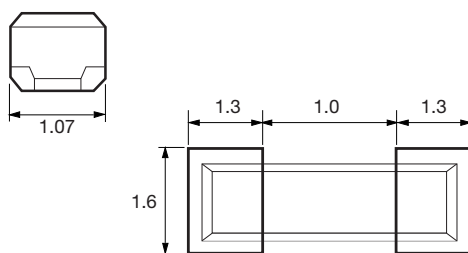


Figure 2) ECX-32 Land Pattern

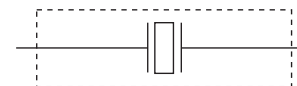


Figure 3) ECX-32 Crystal Connection