

The ultra-miniature ECS-.327-CDX-1082 is a very compact SMD Tuning Fork Crystal. Low ESR part recommended by STMicroelectronics for the STM32 Microcontrollers.

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- Low Power RTC Applications such as STM32 [AN2867](#)
- 2.0 x 1.2 mm Footprint
- Extended Temp. Range
- Low ESR
- RoHS Compliant

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-.327-CDX-1082			UNITS
		MIN	TYP	MAX	
Frequency			32.768		KHz
Frequency Tolerance	@ +25°C			± 20	ppm
Temperature Coefficient		-0.028	-0.034	-0.040	ppm/°C <sup>2</sup>
Shunt Capacitance	Co		1.5		pF
Load Capacitance			4		pF
Drive Level	DL		0.1	0.5	μW
Equivalent Series Resistance	R1		60K	80K	Ω
Crystal Q		9,000	20,000		
Turnover Temperature		+20	+25	+30	°C
Operating Temperature	Topr	-40		+85	°C
Storage Temperature	Tstg	-55		+125	°C
Aging (First Year)	@ +25°C ±3°C			±3	ppm
Insulation Resistance	@ 100Vdc ±15V	500M			Ω

## DIMENSIONS (mm)

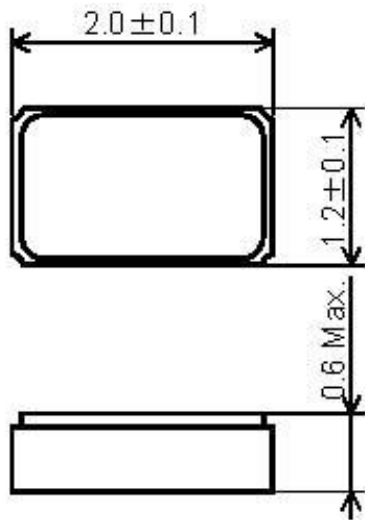
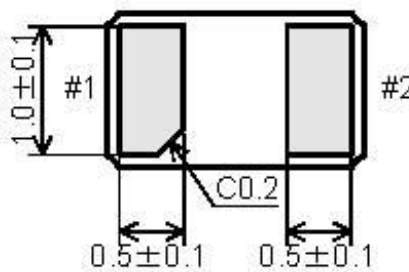


Figure 1) Top, Side, and Bottom views



PAD CONNECTIONS	
1	In/Out
2	Out/In

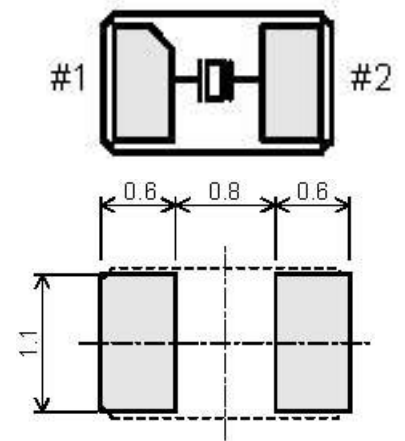
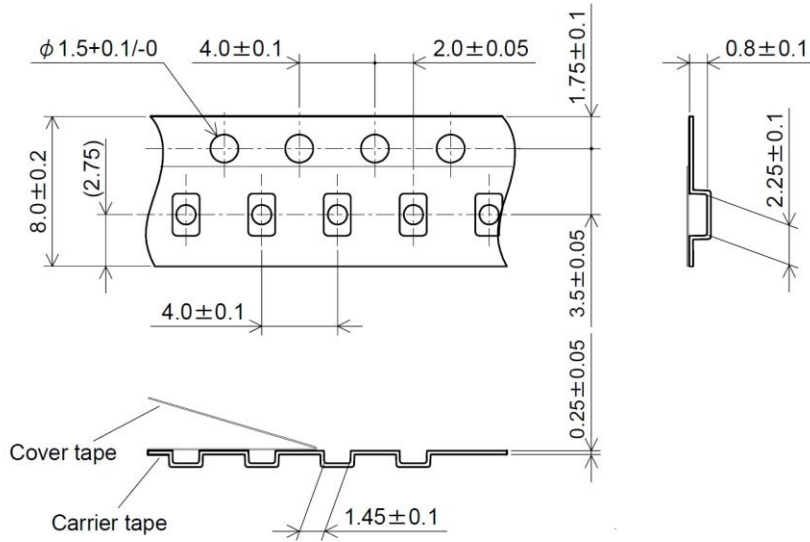


Figure 2) Suggested Land Pattern

**PART NUMBER: Example ECS-.327-CDX-1082**

**POCKET TAPE DIMENSIONS (mm)**



SOLDER PROFILE	
Peak solder Temp	+260°C Max 10 sec Max.
	2 Cycles Max.
	MSL 1, Lead Finish Au



Figure 1) Suggested Reflow Profile

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