

The ultra-miniature ECS-.327-CDX-2216 is a very compact SMD Tuning Fork Crystal with a ESR of 80KΩ and a tolerance of  $\pm 20$  ppm. The 1.6 x 1.0 x 0.5 mm ceramic package is ideal for IOT applications.

[Request a Sample](#)

## ECS-.327-CDX-2216



- Low Profile 0.5 mm Max.
- 1.6 x 1.0 mm Footprint
- $\pm 20$  ppm tolerance @ +25°C
- Extended Temp. Range
- RoHS Compliant
- Low Power RTC Applications such as STM32 [AN2867](#)

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-.327-CDX-2216			UNITS
		MIN	TYP	MAX	
Frequency			32.768		KHz
Frequency Tolerance	@ +25°C			$\pm 20$	ppm
Load Capacitance			7		pF
Drive Level	DL		0.1	0.5	μW
Equivalent Series Resistance	R1			80K	Ω
Turnover Temperature		+20	+25	+30	°C
Temperature Coefficient		-0.028	-0.034	-0.040	ppm/°C <sup>2</sup>
Shunt Capacitance	Co		1.3		pF
Aging (First Year)	@ +25°C $\pm 3$ °C			$\pm 3$	ppm
Operating Temperature	T <sub>opr</sub>	-40		+85	°C
Storage Temperature	T <sub>stg</sub>	-55		+125	°C
Insulation Resistance	@ 100V DC	500M			Ω

## DIMENSIONS (mm)

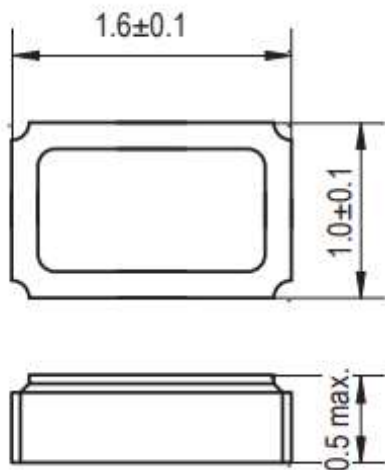
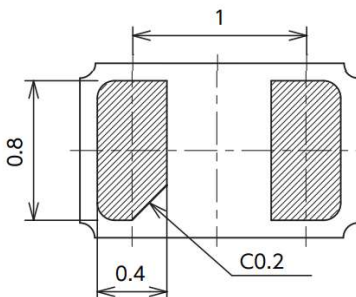


Figure 1) Top, Side, and Bottom views



### PAD CONNECTIONS

1	In/Out
2	Out/In

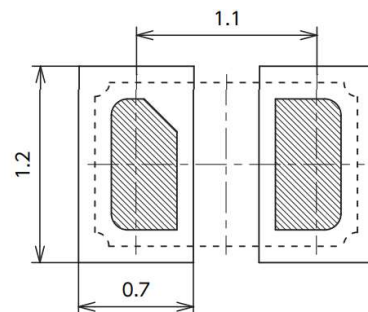
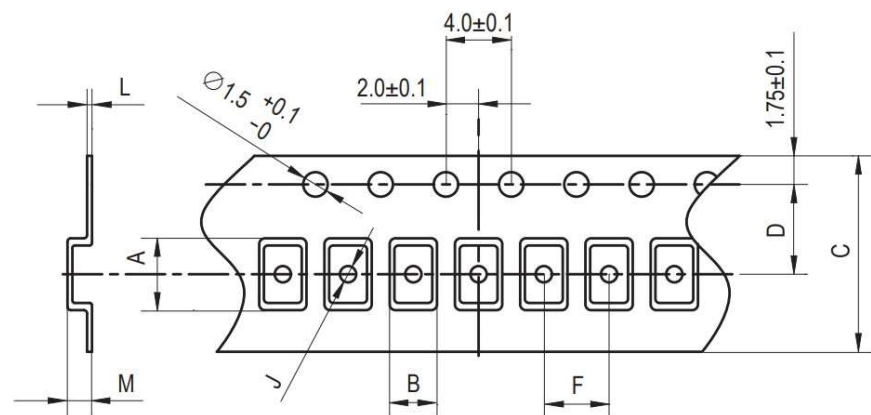


Figure 2) Suggested Land Pattern

Part Number: ECS-.327-CDX-2216

## POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
1.85	1.25	8.0	3.5	4.0	0.5	0.25	0.65	180	3000pcs

### SOLDER PROFILE

Peak solder Temp +260°C Max 10 sec Max.

2 Cycles Max.

MSL 1, Lead Finish Au

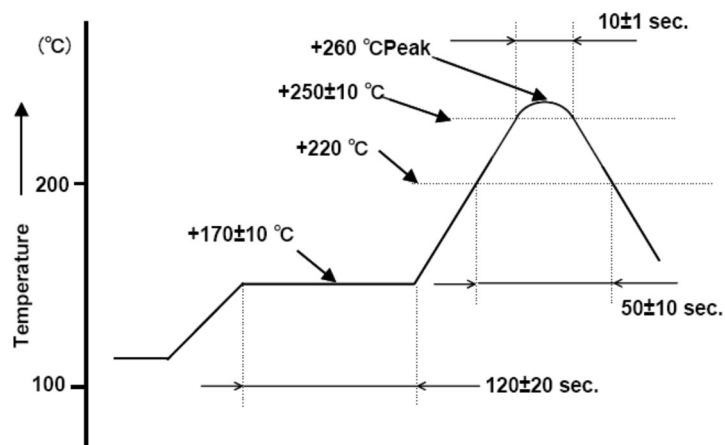


Figure 1) Suggested Reflow Profile

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ECS:

[ECS-.327-CDX-2216](#)