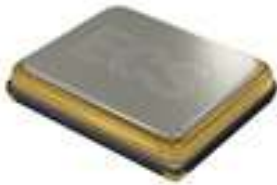


The miniature ECX-2236B2 is a compact SMD Crystal that offers low aging of  $\pm 2$  ppm first year. The industry standard 2.5 x 2.0 x 0.55 mm ceramic package is ideal for wireless applications.

[Request a Sample](#)

## ECX-2236B2 SMD CRYSTAL



- Low Profile
- 2.5 x 2.0 mm Footprint
- Extended Temp. Range
- IOT/Wearable applications

## DIMENSIONS (mm)

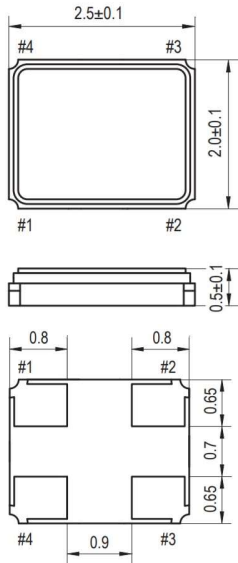


Figure 1) Top, Side, and Bottom

Crystal is symmetrical, pad 1 & 3 are interchangeable.  
Chamfer on the bottom pad has no electrical significance.

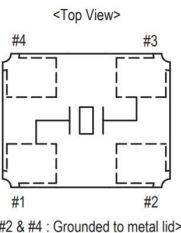


Figure 2) Suggested land

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-2236B2			UNITS
		MIN	TYP	MAX	
Frequency		12.000		50.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@ +25°C (C option)			$\pm 10$	ppm
Frequency Stability*	-30 ~ +85°C (KY option)			$\pm 10$	ppm
Shunt Capacitance	Co			3	pF
Load Capacitance	Specify in P/N		8		pF
Drive Level	DL			100	$\mu$ W
Operating Temperature*	T <sub>opr</sub> (Y option)	-30		+85	°C
Storage Temperature	T <sub>stg</sub>	-55		+125	°C
Aging (First Year)	@ +25°C $\pm 3^\circ$ C			$\pm 2$	ppm

Frequency (MHz)	ESR $\Omega$ Max.
12.000 ~ 15.999	130
16.000 ~ 19.999	70
20.000 ~ 29.999	50
30.000 ~ 39.999	40
40.000 ~ 50.000	30

### Pad Connections

1	In/Out
2	Gnd
3	Out/In
4	Gnd

## PART NUMBERING GUIDE: Example ECS-240-8-36B2-CKY-TR

ECS - FREQUENCY ABBREVIATION		LOAD CAPACITANCE	PACKAGE	AVAILABLE OPTIONS			PACKAGING
				Tolerance	Stability	Temp Range	
ECS	240 = 24.000 MHz See P/N Guide	8 = 8 pF 10=10 pF	-36B2 = ECX-2236B2	Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm 7 = ± 7 ppm	Blank= Std D = ±100 ppm E = ± 50 ppm G = ± 30 ppm H = ± 25 ppm T = ± 20 ppm † W = ±15 ppm † K = ± 10 ppm †	Blank= Std L = -10 ~ +70°C M = -20 ~ +70°C Y = -30 ~ +85°C N = -40 ~ +85°C P = -40 ~ +105°C S = -40 ~ +125°C	TR = Tape & Reel 3K/Reel

\* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

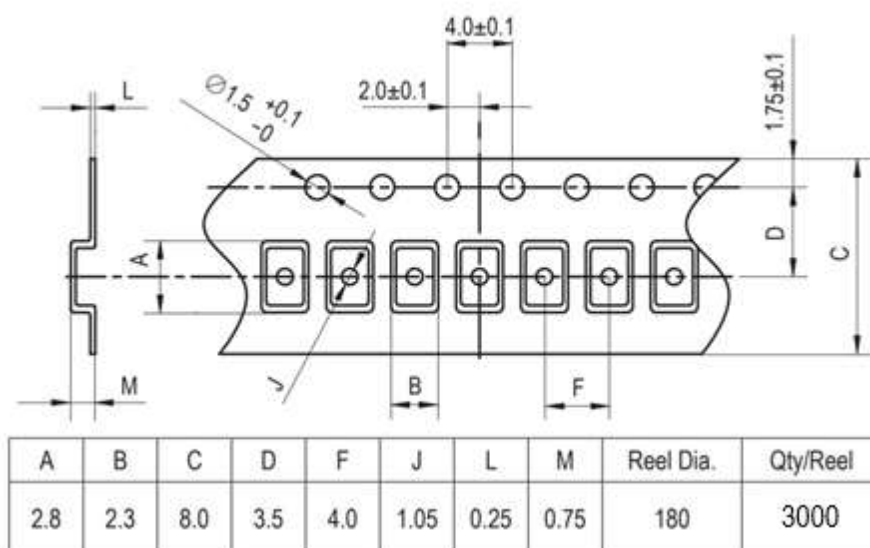
Rev.2021

\* Specify available options in P/N.

$\dagger$  Contact ECS for availability over extended temp range.

Rev.2021

### POCKET TAPE DIMENSIONS (mm)

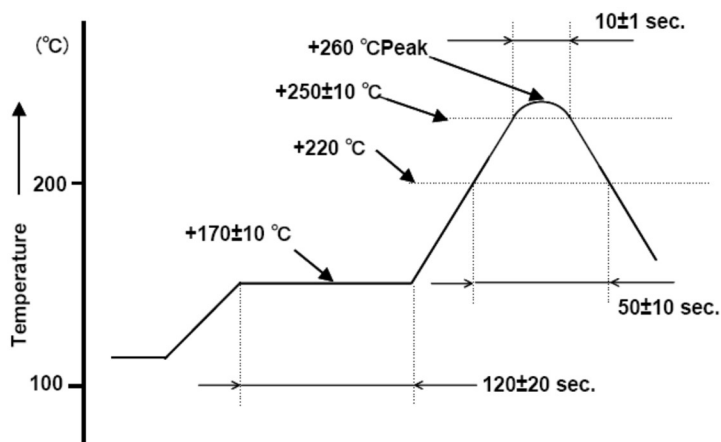


## SOLDER PROFILE

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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## ECS:

[ECS-120-10-36B2-CWY-TR](#) [ECS-160-8-36B2-CKM-TR](#) [ECS-160-8-36B2-CKY-TR](#) [ECS-163.84-10-36B2-CTN-TR](#)  
[ECS-240-8-36B2-CKM-TR](#) [ECS-240-8-36B2-CWN-TR](#) [ECS-245.7-10-36B2-CTM-TR](#) [ECS-250-8-36B2-CKM-TR](#) [ECS-](#)  
[260-8-36B2-CKM-TR](#) [ECS-300-8-36B2-CKM-TR](#) [ECS-320-10-36B2-CKM-TR](#) [ECS-320-10-36B2-CTN-TR](#) [ECS-320-8-](#)  
[36B2-CKM-TR](#) [ECS-320-8-36B2-CKY-TR](#) [ECS-120-10-36B2-JTN-TR](#) [ECS-160-9-36B2-CKM-TR](#) [ECS-240-10-36B2-](#)  
[CTN-TR](#) [ECS-250-10-36B2-CTN-TR](#) [ECS-250-18-36B2-CTY-TR](#) [ECS-320-12-36B2-CKY-TR](#) [ECS-400-10-36B2-](#)  
[CKM-TR](#) [ECS-250-10-36B2-JTM-TR](#)