

The sub miniature ECX-1247B is a very compact SMD Crystal. The 1.6 x 1.2 x 0.3 mm ceramic package is ideal for RFID, NFC, WiFi, RF, Video, and Audio applications.

[Request a Sample](#)



- Low 1<sup>st</sup> Year Aging
- 1.6 x 1.2 mm Footprint
- Extended Temp. Range Option
- RoHS Compliant

### DIMENSIONS (mm)

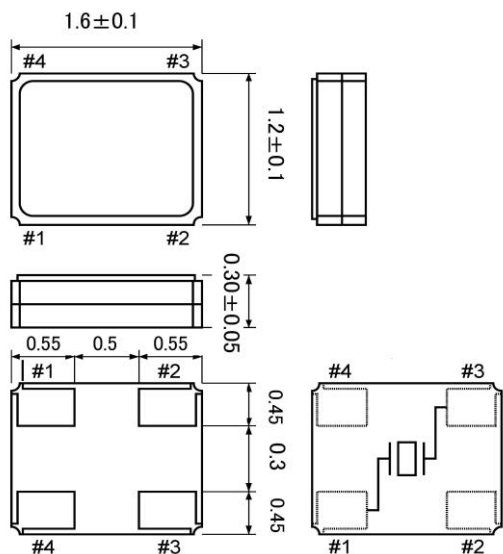


Figure 1) Top, Side, and Bottom

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

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-1247B			UNITS
		MIN	TYP	MAX	
Frequency		24.000		80.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@ +25°C			± 7	ppm
Frequency Stability*	-20 ~ +70°C			± 10	ppm
Shunt Capacitance	Co			5	pF
Load Capacitance	Specify in P/N		8		pF
Drive Level	DL			100	μW
Operating Temperature*	T <sub>opr</sub>	-40		+85	°C
Storage Temperature	T <sub>stg</sub>	-40		+125	°C
Aging (First Year)	@ +25°C ±3°C			±1	ppm

Frequency (MHz)	ESR Ω Max.
24.000 ~ 29.999	100
30.000 ~ 48.999	80
49.000 ~ 80.000	50

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

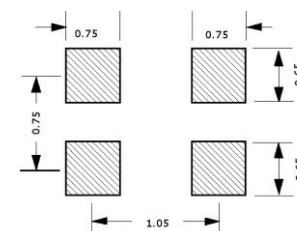


Figure 2) Suggested land

### PART NUMBERING GUIDE: Example ECS-320-8-47B-7KM-TR

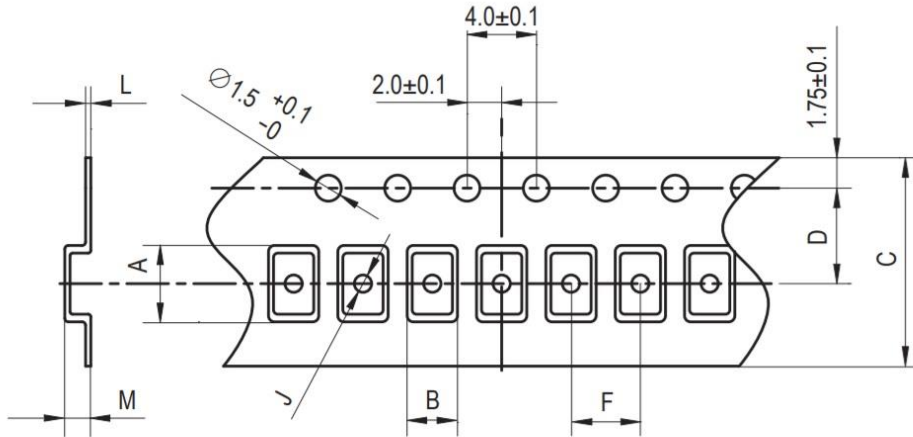
ECS - FREQUENCY ABBREVIATION	LOAD CAPACITANCE	PACKAGE	AVAILABLE OPTIONS		PACKAGING		
			Tolerance	Stability			
ECS	320 = 32.000 MHz See P/N Guide	8 = 8 pF S=Series	-47B = ECX-1247B	Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm 7 = ± 7 ppm	Blank= Std D= ±100 ppm E = ± 50 ppm G = ± 30 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 1K/Reel

\* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

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**POCKET TAPE DIMENSIONS (mm)**



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
1.84	1.55	8.0	3.5	4.0	0.5	0.25	0.45	180	1000

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

DEVELOPED FREQUENCIES	
Abbreviation	Frequency (MHZ)
240	24.000
245.7	24.576
260	26.000
320	32.000
360	36.000
400	40.000
480	48.000
500	50.000

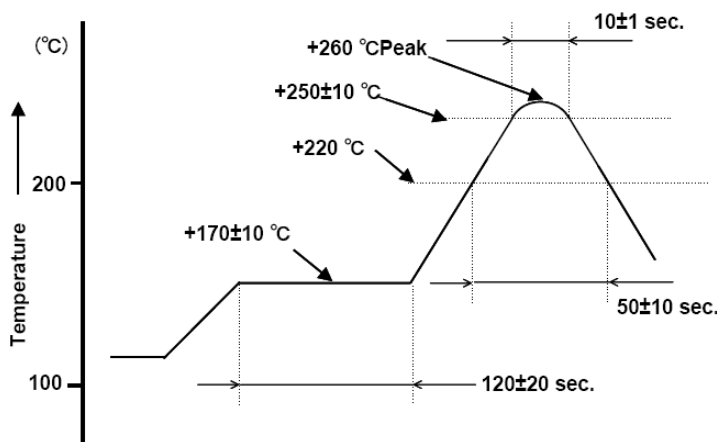


Figure 1) Suggested Reflow Profile