



**THE DATASHEET OF  
ECS-320-8-47-JTN-TR**



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

Request a Sample



## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-1247			UNITS
		MIN	TYP	MAX	
Frequency		24.000		80.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@ +25°C			± 20	ppm
Frequency Stability*	-40 ~ +85°C			± 20	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		+90	°C
Aging (First Year)	@ +25°C ±3°C			±5	ppm

- Low Profile
- 1.6 x 1.2 mm Footprint
- Extended Temp. Range Option
- RoHS Compliant

### DIMENSIONS (mm)

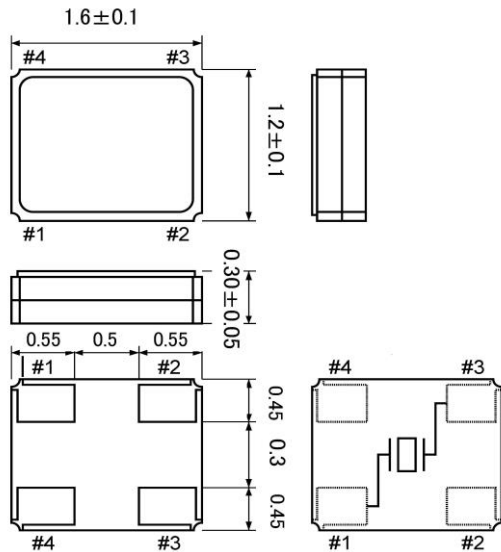


Figure 1) Top, Side, and Bottom

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

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

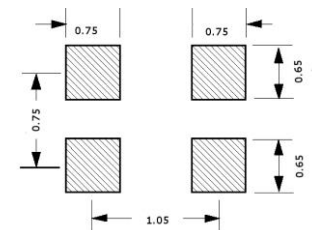


Figure 2) Suggested land

## PART NUMBERING GUIDE: Example ECS-260-8-47-JTN-TR

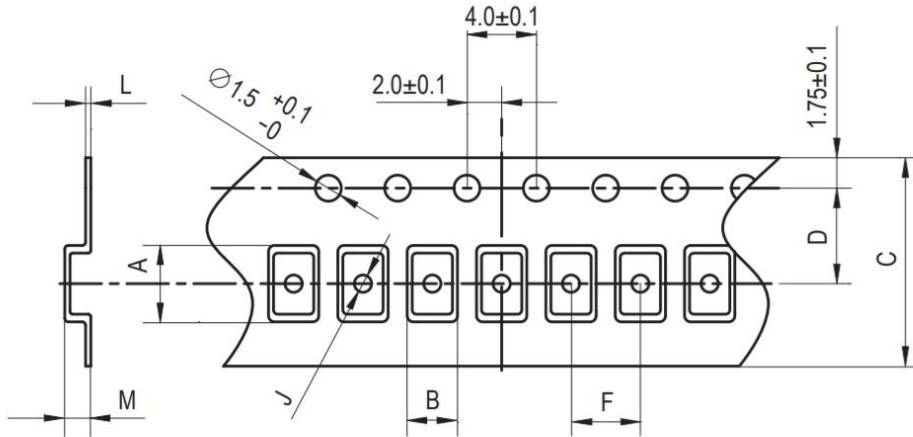
ECS - FREQUENCY ABBREVIATION	LOAD CAPACITANCE	PACKAGE	AVAILABLE OPTIONS			PACKAGING	
			Tolerance	Stability	Temp Range		
ECS	260 = 26.000 MHz See P/N Guide	8 = 8 pF S=Series	-47 = ECX-1247	Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm	Blank = Std D = ± 100 ppm E = ± 50 ppm G = ± 30 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

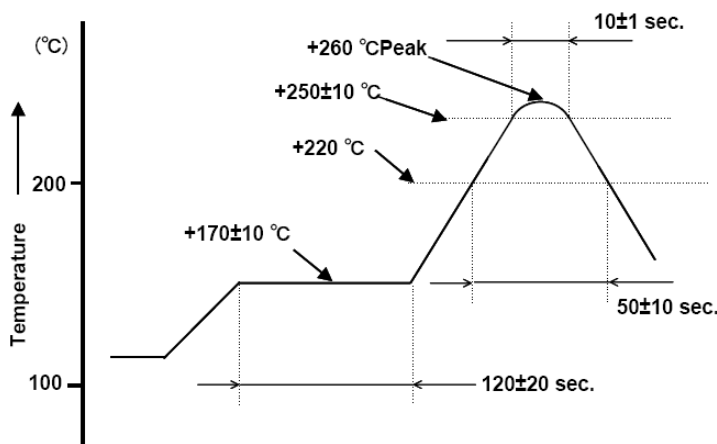


Figure 1) Suggested Reflow Profile

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

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 [ECS Inc. Information](#)

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