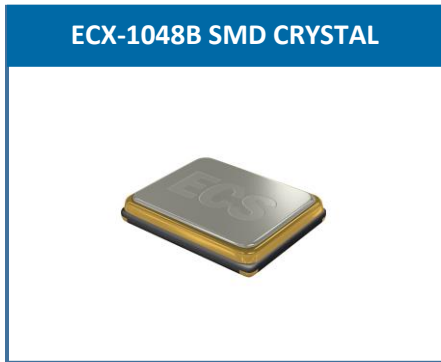


The ultra-miniature ECX-1048B is our smallest compact Crystal. The 1.2 x 1.0 x 0.35 mm ceramic package is ideal for today's SMD manufacturing environment.

Request a Sample

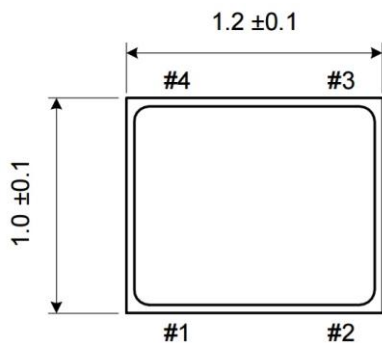


- Low Profile
- 1.2 x 1.0 mm Footprint
- Extended Temp. Range
- RoHS Compliant
- IOT/Wearable Applications

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-1048B			UNITS
		MIN	TYP	MAX	
Frequency		32.000		60.000	MHz
Frequency Tolerance	@ +25°C (C)			± 10	ppm
Frequency Stability	-40 ~ +85°C (TN)			± 20	ppm
Equivalent Series Resistance (ESR)	32 ~ 47.9 MHz			100	Ω
	48.0 ~ 60.0 MHz			80	Ω
Shunt Capacitance	Co			3	pF
Load Capacitance	Specify in P/N		10		pF
Drive Level	DL		10	100	μW
Operating Temperature	Topr	-40		+85	°C
Storage Temperature	Tstg	-40		+105	°C
Aging (First Year)	@ +25°C ±3°C			±2	ppm

## DIMENSIONS (mm)



PAD CONNECTIONS	
1	In/Out
2	Gnd & Lid
3	Out/In
4	NC

Figure 1) Top, Side, and Bottom views

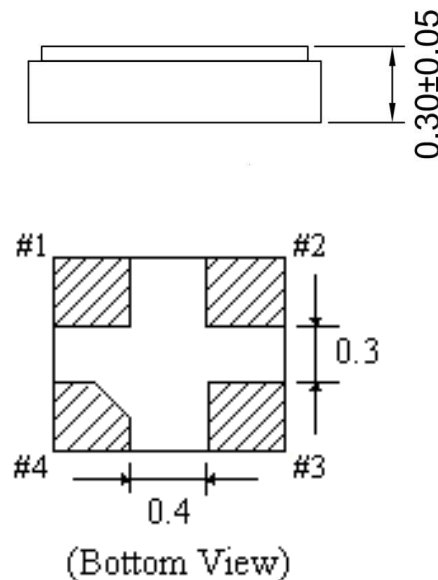


Figure 2) Suggested Land Pattern

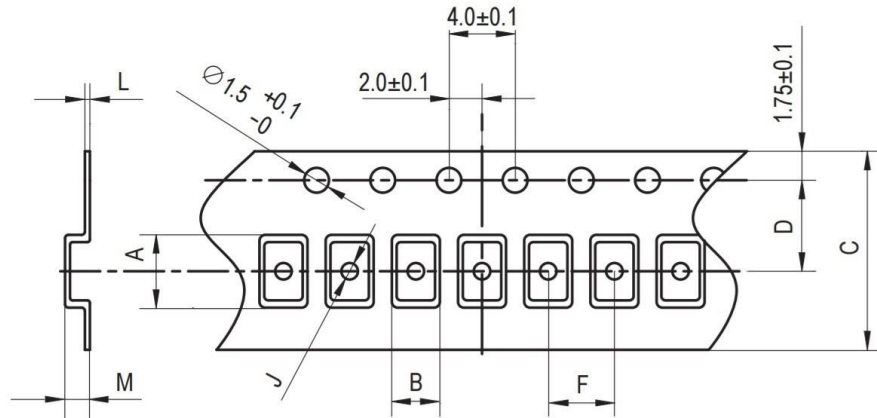
## PART NUMBERING GUIDE: Example ECS-480-10-48B-CTN-TR

ECS	FREQUENCY ABBREVIATION	LOAD CAPACITANCE	PACKAGE	Tolerance	CUSTOM OPTIOND * Stability	Temp Range	PACKAGING
ECS	480 = 48.000 MHz See P/N Guide	10 = 10 pF * Other CL's available	-48B = ECX-1048B	A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm	E = ± 50 ppm G = ± 30 ppm H = ± 25 ppm T = ± 20 ppm W = ± 15 ppm *K = ± 10 ppm	M = -20 ~ +70°C Y = -30 ~ +85°C N = -40 ~ +85°C	TR = 3K/Reel  TR5 = 5K/Reel

\*Contact ECS for availability

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**POCKET TAPE DIMENSIONS (mm)**



A	B	C	D	F	J	L	M	Reel Dia.
1.42	1.17	8.0	3.5	4.0	0.5	0.2	0.65	180

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

STANDARD FREQUENCIES	
Abbreviation	Frequency (MHZ)
320	32.000
480	48.000
520	52.000

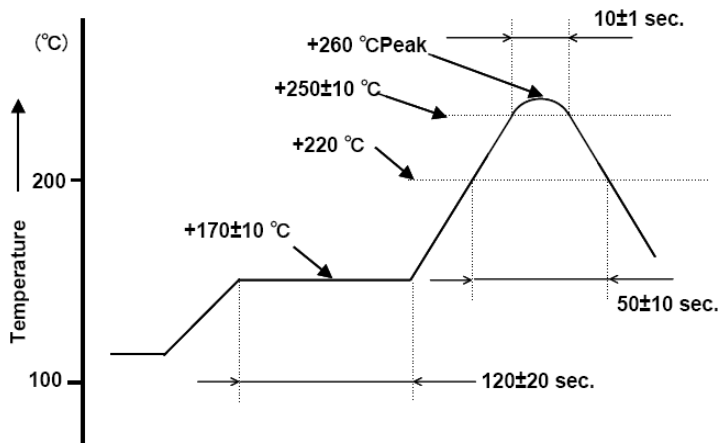


Figure 1) Suggested Reflow Profile