

The miniature ECX-42 is a compact SMD Crystal. The 4.0 x 2.5 x 0.8 mm ceramic package is ideal for today's SMD manufacturing environment.

[Request a Sample](#)

ECX-42 SMD CRYSTAL



- Low Profile
- 4.0 x 2.5 mm Footprint
- Extended Temp. Range Option
- RoHS Compliant

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-42			UNITS
		MIN	TYP	MAX	
Frequency		12.000		50.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@ +25°C			± 30	ppm
Frequency Stability*	-10 ~ +70°C			± 50	ppm
Shunt Capacitance	Co			5	pF
Load Capacitance	Specify in P/N		12		pF
Drive Level	DL			300	μW
Operating Temperature*	T _{opr}	-10		+70	°C
Storage Temperature	T _{stg}	-55		+125	°C
Aging (First Year)	@ +25°C ±3°C			±5	ppm

DIMENSIONS (mm)

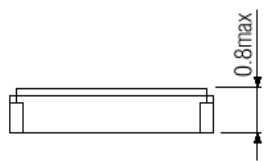
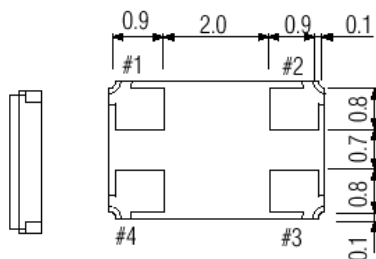
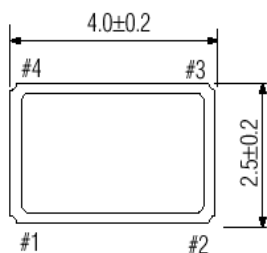
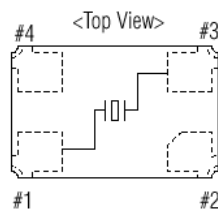


Figure 1) Top, Side, and Bottom

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



Pad Connections

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

Frequency (MHz)	ESR Ω Max.
12.000 ~ 15.999	80
16.000 ~ 19.999	60
20.000 ~ 23.999	50
24.000 ~ 50.000	40

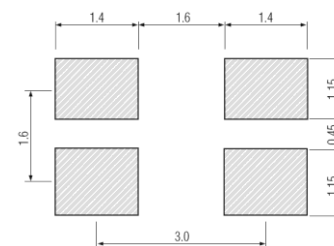


Figure 2) Suggested land

PART NUMBERING GUIDE: Example ECS-200-20-42-TR

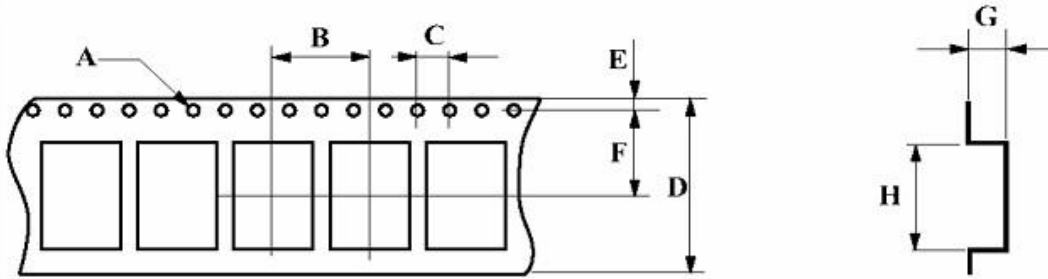
ECS - FREQUENCY ABBREVIATION	LOAD CAPACITANCE	PACKAGE	AVAILABLE OPTIONS			PACKAGING	
			Tolerance	Stability	Temp Range		
ECS	200 = 20.000 MHz See P/N Guide	20 = 20 pF S = Series	42 = ECX-42	Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm	Blank = Std D = ± 100 ppm E = ± 50 ppm G = ± 30 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 U = -55 ~ +125°C	TR = Tape & Reel 1K/Reel

* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

Rev.2017

POCKET TAPE DIMENSIONS (mm)



TAPE SPECIFICATIONS (mm)								
MODEL	A	B	C	D	E	F	G	H
ECS-42	φ 1.5	4.0	4.0	12.0	2.50	3.5	1.0	4.4

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

DEVELOPED FREQUENCIES	
Abbreviation	Frequency (MHZ)
120	12.000
130	13.000
160	16.000
240	24.000
260	26.000
320	32.000

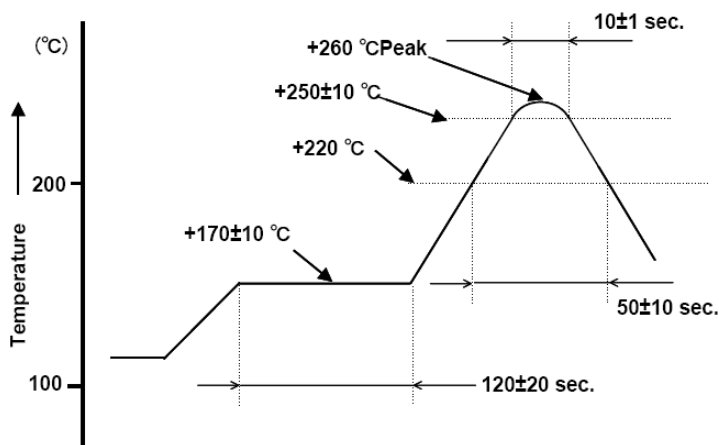


Figure 1) Suggested Reflow Profile

Mouser Electronics

Authorized Distributor

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[ECS-240-13-42-CKM-TR](#) [ECS-260-13-42-CKM-TR](#) [ECS-144.4-9-42-CKM-TR](#) [ECS-160-9-42-CKM-TR](#) [ECS-320-13-42-CKM-TR](#) [ECS-196.8-9-42-CKM-TR](#) [ECS-120-9-42-CKM-TR](#) [ECS-130-9-42-CKM-TR](#) [ECS-160-10-42-CKM-TR](#)