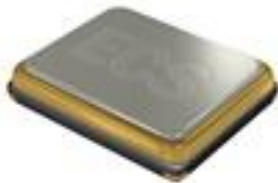


The ECX-33B2Q is a miniature SMD Crystal with a 3.2 x 2.5 mm footprint. AEC-Q200 Qualified.

ECX-33B2Q SMD CRYSTAL

[Request a Sample](#)

ECX-33B2Q SMD CRYSTAL



- Low Profile
- 3.2 x 2.5 mm Footprint
- RoHS Compliant
- AEC-Q200 Qualified

DIMENSIONS (mm)

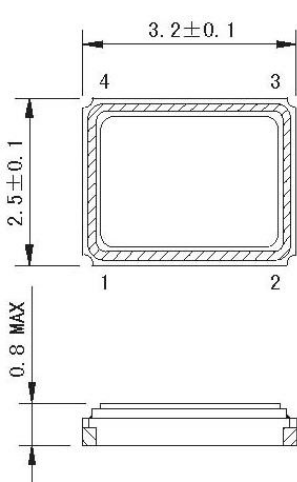


Figure 1) Top, Side, and Bottom

Crystal is symmetrical, pad 1 & 3 are interchangeable. Chamfer on the bottom pad has no electrical significance and can be on pad 1 or 4.

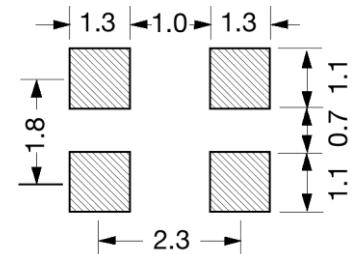
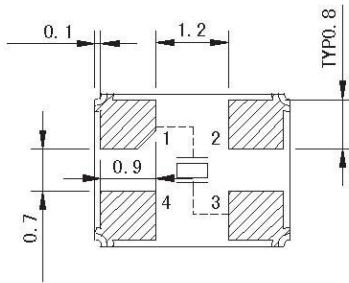


Figure 2) Suggested land

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-33B2Q			UNITS
		MIN	TYP	MAX	
Frequency		8.000		54.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@+25°C			± 30	ppm
Frequency Stability*	-40 ~ +125°C (VY Option)			± 150	ppm
Shunt Capacitance	Co			2	pF
Load Capacitance	Specify in P/N		8		pF
Drive Level	DL			200	μW
Operating Temperature*	T _{opr} (VY Option)	-40		+150	°C
Storage Temperature	T _{stg}	-55		+150	°C
Aging (First Year)	@ +25°C ±3°C			±2	ppm

Frequency (MHz)	ESR Ω Max.
8.000 ~ 9.999	500
10.000 ~ 15.999	100
16.000 ~ 19.999	70
20.000 ~ 25.999	50
26.000 ~ 54.000	35

Pad Connections

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

PART NUMBERING GUIDE: Example ECS-200-8-33B2Q-VY-TR3

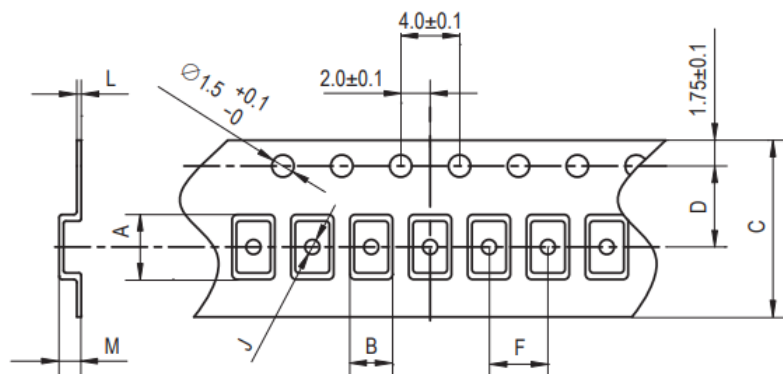
ECS - FREQUENCY ABBREVIATION	LOAD CAPACITANCE	PACKAGE	AVAILABLE OPTIONS			PACKAGING
			Tolerance	Stability	Temp Range	
ECS	200 = 20.000 MHz See P/N Guide	33B2Q = ECX-33B2Q	Blank = ±30 ppm A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm	V = ±150 ppm D = ±100 ppm † E = ± 50 ppm † G = ± 30 ppm † H = ± 25 ppm † T = ± 20 ppm † W = ±15 ppm † K = ± 10 ppm †	L = -10 ~ +70°C M = -20 ~ +70°C N = -40 ~ +85°C P = -40 ~ +105°C S = -40 ~ +125°C U = -55 ~ +125°C Y = -40 ~ +150°C	TR =1K TR3=3K Qty/Reel

* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

Rev.2024

POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
3.5	2.8	8.0	3.5	4.0	1.05	0.25	1.0	180	3000pcs (1000pcs)

SOLDER PROFILE

Peak solder Temp +260°C Max 10 sec Max.

2 Cycles Max.

MSL 1, Lead Finish Au

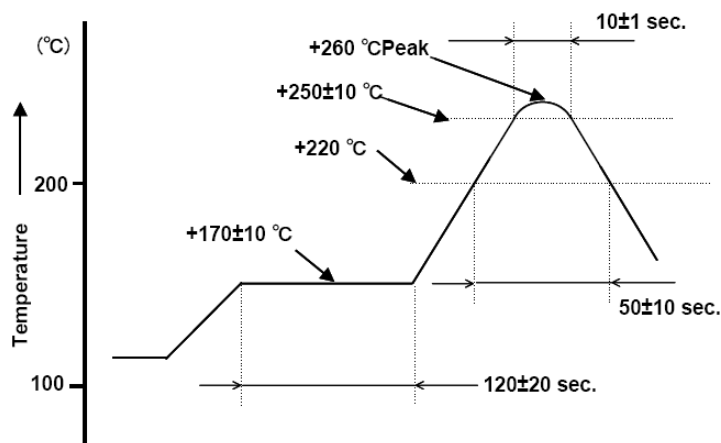


Figure 1) Suggested Reflow Profile

DEVELOPED FREQUENCIES

Abbreviation	Frequency (MHZ)
80	8.000
100	10.000
120	12.000
122.8	12.288
130	13.000
135.6	13.560
143	14.31818
147.4	14.7456
160	16.000
163.8	16.384
184	18.432
196.6	19.6608
200	20.000
221	22.1184
240	24.000
245.7	24.576
250	25.000
260	26.000
270	27.000
286.3	28.63636
300	30.000
320	32.000
330	33.000
400	40.000
480	48.000