RoHS COMPLIANT

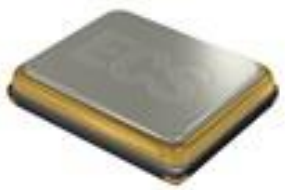
ECX-2236Q SMD CRYSTAL

The ECX-2236Q is a miniature SMD Crystal with a 2.5 x 2.0 mm footprint. AEC-Q200 Qualified

Request a Sample

ECS INC INTERNATIONAL®

ECX-2236Q SMD CRYSTAL



- Low Profile
- 2.5 x 2.0 mm Footprint
- RoHS Compliant
- AEC-Q200 Qualified

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-2236Q			UNITS
		MIN	TYP	MAX	
Frequency		12.000		40.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@ +25°C			± 30	ppm
Frequency Stability*	-40 ~ +125°C (ES Option)			± 50	ppm
Shunt Capacitance	Co			5	pF
Load Capacitance	Specify in P/N		8		pF
Drive Level	DL		10	100	µW
Operating Temperature*	Topr (ES Option)	-40		+125	°C
Storage Temperature	Tstg	-40		+125	°C
Aging (First Year)	@ +25°C ±3°C			±5	ppm

DIMENSIONS (mm)

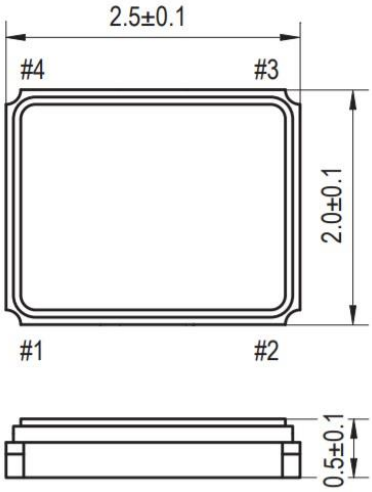
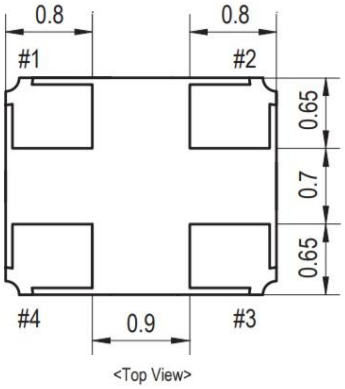
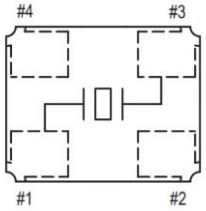


Figure 1) *Top, Side, and Bottom*

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



<Top View>



<#2 & #4 : Grounded to metal lid>

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

Frequency (MHz)	ESR Ω Max.
12.000 ~ 15.999	150
16.000 ~ 19.999	80
20.000 ~ 29.999	60
30.000 ~ 34.999	50
35.000 ~ 40.000	40

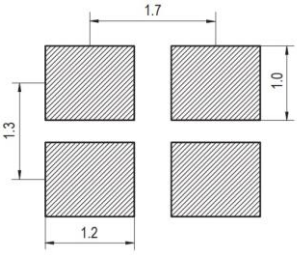


Figure 2) *Suggested land*

PART NUMBERING GUIDE: Example ECS-240-8-36Q-ES-TR

ECS -	FREQUENCY ABBREVIATION	LOAD CAPACITANCE	PACKAGE	AVAILABLE OPTIONS			PACKAGING
				Tolerance	Stability	Temp Range	
ECS	240 = 24.000 MHz See P/N Guide	8 = 8 pF S = Series	36Q = ECX-2236Q	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 3K/Reel

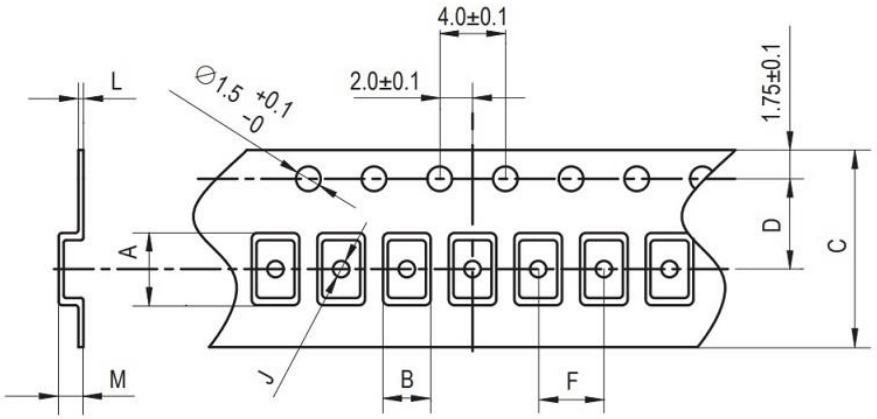
* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

Rev.2017

ECX-2236Q
SMD CRYSTAL

POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
2.8	2.3	8.0	3.5	4.0	1.05	0.25	0.75	180	3000

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

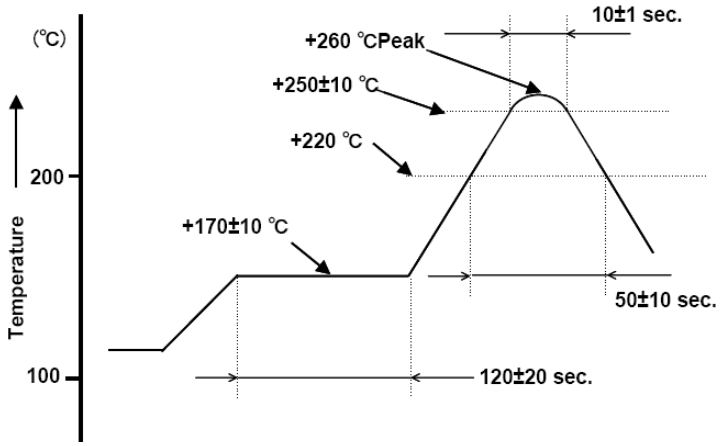


Figure 1) *Suggested Reflow Profile*

DEVELOPED FREQUENCIES	
Abbreviation	Frequency (MHZ)
120	12.000
160	16.000
200	20.000
240	24.000
245.7	24.5760
250	25.000
260	26.000
270	27.000
300	30.000
320	32.000
400	40.000
480	48.000