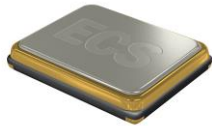


The ultra-miniature ruggedized ECX-1637QZ compact SMD Crystal. The 2.0 x 1.6 x 0.45 mm ceramic package with additional internal bonding points is ideal for harsh high shock/vibration environments such as Automotive or TPMS applications.

Request a Sample

## ECX-1637QZ SMD CRYSTAL



- 2.0 x 1.6 mm Footprint
- Extended Temp. Range
- AEC-Q200 Qualified
- Ruggedized Automotive/TPMS Applications

## DIMENSIONS (mm)

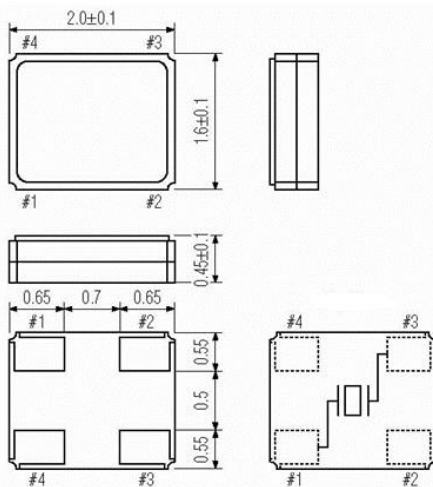


Figure 1) Top, Side, and Bottom

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

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-1637QZ			UNITS
		MIN	TYP	MAX	
Frequency		16.000		60.000	MHz
Frequency Tolerance	@ +25°C (A Option)			± 25	ppm
Frequency Stability	-40 ~ +125°C (DS Option)			± 100	ppm
Equivalent Series Resistance (ESR)	16 ~ 19.999 MHz			150	Ω
	20 ~ 25.999 MHz			100	Ω
	26 ~ 39.999 MHz			80	Ω
	40 ~ 60.000 MHz			70	Ω
Shunt Capacitance	Co			5	pF
Load Capacitance	Specify in P/N		10		pF
Drive Level	DL		10	100	μW
Vibration Resistance, 10~2000 Hz p-p 1.5 mm: 20g's, Shock Resistance: 5000g's. 0.3 msec					
Operating/Storage Temp	Topr	-40		+125	°C
Aging (First Year)	@ +25°C ±3°C			±3	ppm

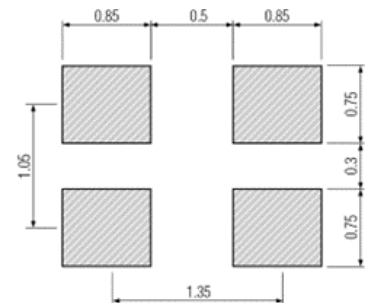


Figure 2) Suggested Land Pattern

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

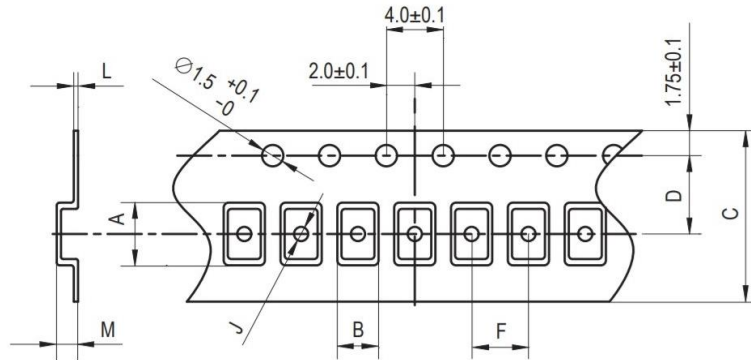
## PART NUMBERING GUIDE: Example ECS-260-12-37QZ-ADS-TR

Frequency Abbreviation	Load Capacitance	Package	Tolerance	Stability	Temp Range	
ECS	10 = 10 pF 12 = 12 pF 16 = 16 pF	37QZ = ECX-1637QZ	Blank = ±15 ppm A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm	Blank = ±50 ppm D = ± 100 ppm E = ± 50 ppm	Blank = -40 ~ +125°C N = -40 ~ +85°C P = -40 ~ +105°C S = -40 ~ +125°C	TR = Tape & Reel
260 = 26.000 MHz *See Developed Frequencies Pg. 2						

\*Contact ECS for availability of non-developed frequencies.

Rev.2022

**POCKET TAPE DIMENSIONS (mm)**



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

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

DEVELOPED FREQUENCIES	
Abbreviation	Frequency (MHZ)
160	16.000
180.8	18.080
196.875	19.6875
240	24.000
250	25.000
260	26.000
320	32.000

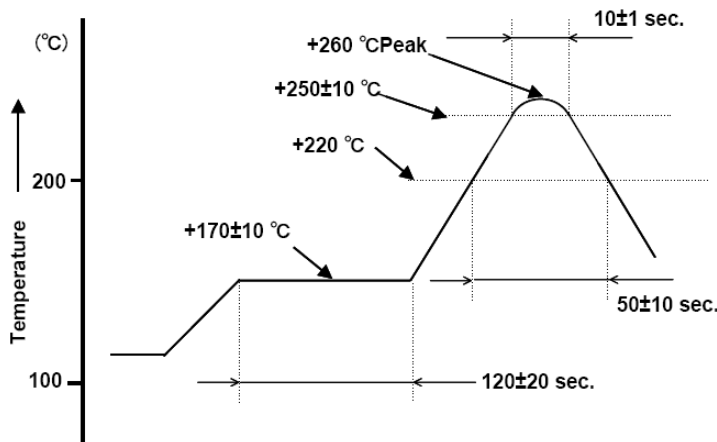


Figure 3) Suggested Reflow Profile