RoHS COMPLIANT

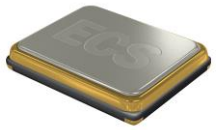
ECX-1637QZ SMD CRYSTAL

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

ECS INC INTERNATIONAL®

ECX-1637QZ SMD CRYSTAL



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

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

DIMENSIONS (mm)

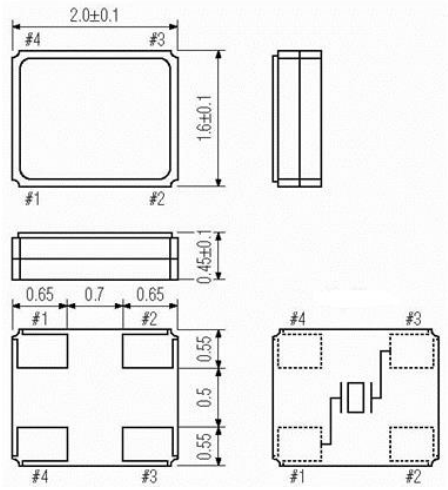


Figure 1) *Top, Side, and Bottom*

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

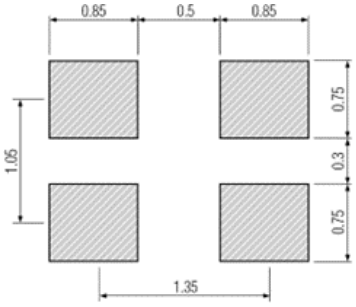


Figure 2) *Suggested Land Pattern*

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

	Frequency Abbreviation	Load Capacitance	Package	Tolerance	Stability	Temp Range	
ECS	260 = 26.000 MHz *See Developed Frequencies Pg. 2	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

*Contact ECS for availability of non-developed frequencies.

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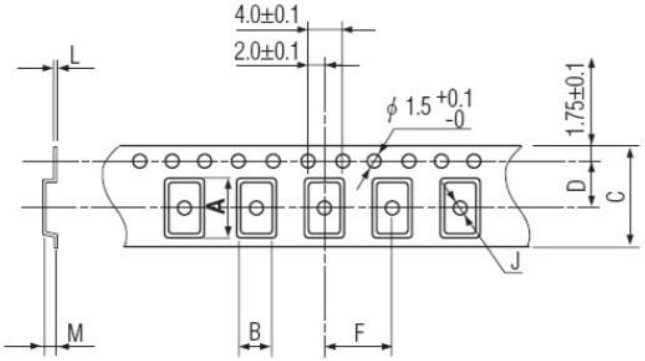
POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.
2.25	1.85	8.0	3.5	4.0	1.0	0.25	0.65	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

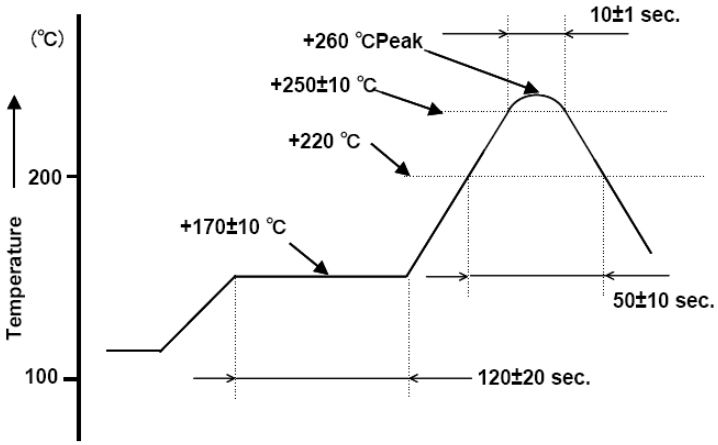


Figure 3) *Suggested Reflow Profile*