

ECX-1637 SMD CRYSTAL

ECS INC

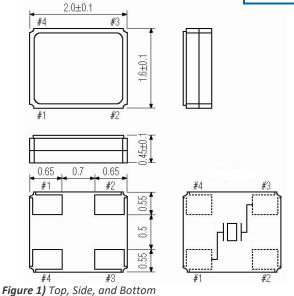
The sub miniature ECX-1637 is a very compact SMD Crystal. The $2.0 \times 1.6 \times 0.45$ mm ceramic package is ideal for LoRa WAN, wireless, cellular and high density applications.

Request a Sample



- Low Profile
- 2.0 x 1.6 mm Footprint
- Extended Temp. Range Option
- RoHS Compliant

DIMENSIONS (mm)



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

OP	ERATING CONDIT	IONS / ELECTRICA	AL CHARACTERISTICS
	PARAMETERS	CONDITIONS	ECX-1637

PARAMETERS	CONDITIONS	ECX-1637		,	UNITS
		MIN	TYP	MAX	
Frequency		16.000		80.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@ +25°C			± 50	ppm
Frequency Stability*	-20 ~ +70°C			± 50	ppm
Shunt Capacitance	Со			5	pF
Load Capacitance	Specify in P/N		8		pF
Drive Level	DL			100	μW
Operating Temperature*	Topr	-20		+70	°C
Storage Temperature	Tstg	-40		+85	°C
Aging (First Year)	@ +25°C ±3°C			±5	ppm

Frequency (MHz)	ESR Ω Max.
16.000 ~ 23.999	100
24.000 ~ 25.999	80
26.000 ~ 39.999	60
40.000 ~ 80.000	50

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

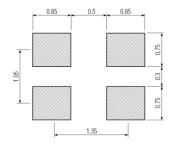


Figure 2) Suggested land

 $S = -40 \sim +125 °C$

 $U = -55 \sim +125 °C$

Rev.2021

PART NUMBERING GUIDE: Example ECS-240-8-37-TR

ECS - FREQUENCY ABBREVIATION		LOAD PACKAGE		AVAILABLE OPTIONS			PACKAGING
		CAPACITANCE		Tolerance	Stability	Temp Range	
ECS	240 = 24.000 MHz See P/N Guide	8 = 8 pF 10 = 10 pF S=Series	-37 = ECX-1637	Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm	Blank= Std D= ±100 ppm E = ± 50 ppm G = ± 30 ppm	Blank= Std L = -10 ~ +70°C M = -20 ~ +70°C Y = -30 ~ +85°C	Oty/Ree
* Specify a	vailable ontions in P/N			C = ± 10 ppm	$H = \pm 25 \text{ ppm}$ $T = \pm 20 \text{ ppm} \pm 100$	N = -40 ~ +85°C P = -40 ~ +105°C	

^{*} Specify available options in P/N.

 $W = \pm 15 ppm †$

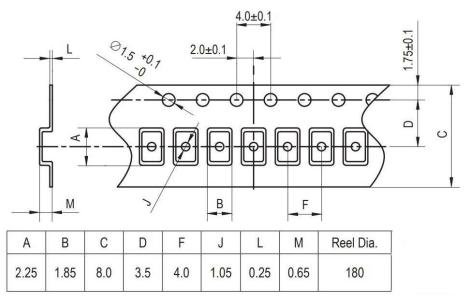
 $K = \pm 10 ppm \dagger$

[†] Contact ECS for availability over extended temp range.





POCKET TAPE DIMENSIONS (mm)



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

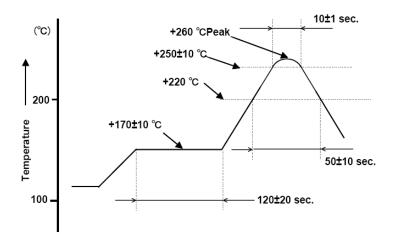


Figure 1) Suggested Reflow Profile

DEVELOPED FREQUENCIES			
Abbreviation	Frequency (MHZ)		
160	16.000		
192	19.200		
200	20.000		
240	24.000		
250	25.000		
260	26.000		
270	27.000		
271.2	27.120		
300	30.000		
320	32.000		
360	36.000		
384	38.400		
400	40.000		
480	48.000		
500	50.000		
540	54.000		