

The ECS-327MV is a miniature AT-cut 32.768 KHz SMD CMOS Oscillator with Multi Volt capability of 1.6 ~ 3.6 V. The 1.6 x 1.2 x 0.7 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT.

[Request a Sample](#)



- 1.6 x 1.2 mm Footprint
- Extended Temp Range
- RoHS Compliant
- Wide Supply Voltage
- Low Current

### DIMENSIONS (mm)

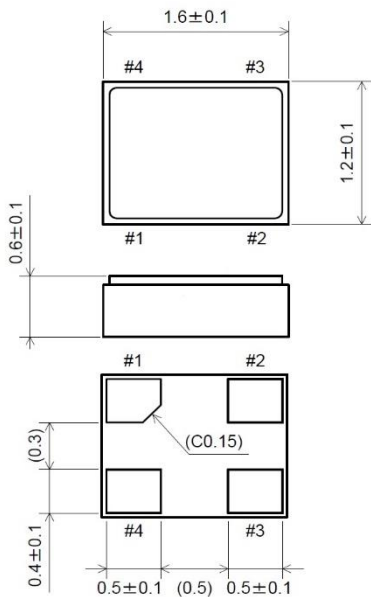


Figure 1) Top, Side, and Bottom views

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-327MV			UNITS
		MIN	TYP	MAX	
Frequency Range			32.768		KHz
* Frequency Stability	-40 ~ +85°C (CN Opt)			±25	ppm
Supply Voltage		1.6		3.63	V
Output Load	CMOS			15	pF
Output Voltage Level	Vol: 0.1 Max./Voh: 0.9Vdd Min. V				
Rise & Fall time	10%Vdd – 90%Vdd			200	ns
Start Up Time	VDD 1.8V			10	mS
Duty Cycle	@ ½ Vdd			45/55	%
Current Consumption	Vdd 3V (No Load)			0.03	mA
Standby Current				3	µA
Operating Temp*	N Option	-40		+85	°C
Storage Temp		-40		+105	°C

### PAD CONNECTIONS

1	Stand-by
2	Gnd
3	Output
4	Vdd

### Tri State Function

Pin 1	Output
0.7 * Vdd Min	Active
0.3 * Vdd Max.	High-Z

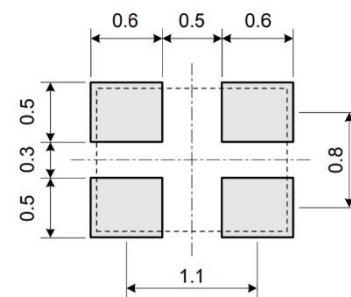
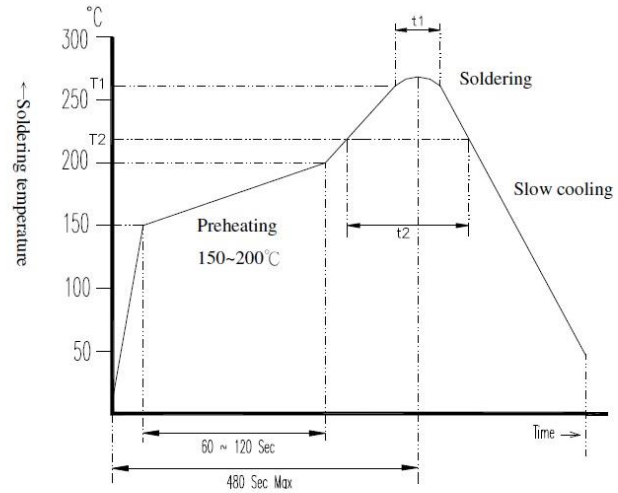


Figure 2) Suggested Land Pattern

### PART NUMBERING GUIDE: Example ECS-327MV-CN-TR

ECS	-	SERIES	-	* STABILITY	TEMP RANGE -	PACKAGING
		327MV 1.6 x 1.2 mm Multi Volt Oscillator 32.768 KHz		A = ±100 ppm B = ±50 ppm C = ±25 ppm D = ±20 ppm	M = -20 ~ +70°C N = -40 ~ +85°C	-TR = Tape & Reel 3K/Reel

\* Frequency Stability includes initial tolerance, temperature, supply voltage & load change reflow frequency shift, and aging.



Application\Temperature	Time	T1 / t1	T2 / t2
Lead Free	260±5°C / 10±5 Sec Max	217°C Min / 60~150 Sec	
Non Lead Free	240±5°C / 10±5 Sec Max	183°C Min / 60~150 Sec	

SOLDER PROFILE
Peak solder Temp +260°C ±5°C 10 ±5 Sec Max.
2 Cycles Max.
MSL 1, Lead Finish Au

Figure 1) Suggested Reflow Profile

## POCKET TAPE DIMENSIONS (mm)

