

The ECS-327ATQMV is a miniature 32.768 KHz SMD AEC-Q200 Qualified HCMOS Oscillator with Multi Volt capability of 1.62 ~ 3.63 V. The 3.2 x 2.5 x 0.9 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT. applications.

[Request a Sample](#)



- 3.2 x 2.5 mm Footprint
- AEC-Q200 Qualified
- AT Strip Crystal for tighter stability
- Multit Volt, Wide Supply Voltage

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-327ATQMV			UNITS
		MIN	TYP	MAX	
Frequency Range			32.768		KHz
* Frequency Stability	-40 ~ +125°C (DS Opt)			±100	ppm
Supply Voltage		1.62		3.63	V
Output Load	CMOS			15	pF
Output voltage Level	VOL:10%V <sub>dd</sub> max./VOH:90%V <sub>dd</sub> min.V DC				
Current Consumption				0.2	mA
Standby Current				20	µA
Rise & Fall time	10%V <sub>dd</sub> – 90%V <sub>dd</sub>			100	ns
Start Up Time	@90%V <sub>dd</sub>			10	mS
Duty Cycle	@ ½ V <sub>dd</sub>			45/55	%
Operating Temp*		-40		+125	°C
Storage Temp		-55		+125	°C

## DIMENSIONS (mm)

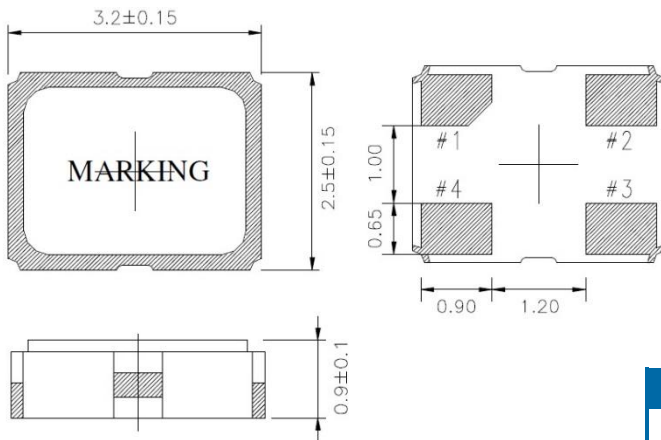


Figure 1) Top, Side, and Bottom views

PAD CONNECTIONS	
1	Tri-state or NC
2	Gnd
3	Output
4	Vdd

Tri State Function	
Pin 1	Output
0.7 * V <sub>dd</sub> Min Or NC	Active
0.3 * V <sub>dd</sub> Max.	High Impedance

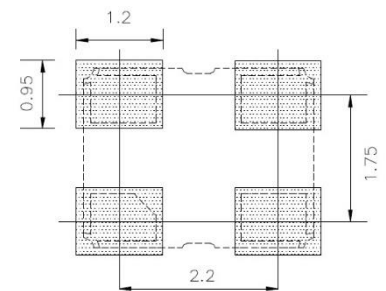


Figure 2) Suggested Land Pattern

## PART NUMBERING GUIDE: Example ECS-327ATQMV-AS-TR

ECS	-	SERIES	-	* STABILITY	-	TEMP RANGE	-	PACKAGING
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327ATQMV  
3.2 x 2.5 mm  
32.768 KHz  
AEC-Q200 Qualified  
Multi Volt Oscillator

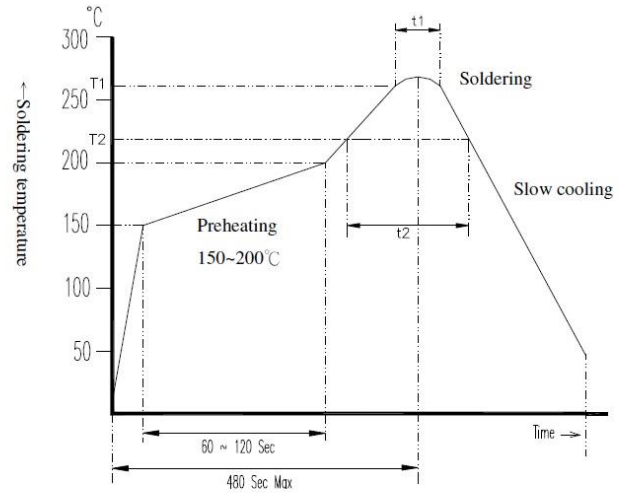
A = ±100 ppm

S = -40 ~ +125°C

-TR =  
Tape  
& Reel  
3K/Reel

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

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



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	

Figure 1) Suggested Reflow Profile

## POCKET TAPE DIMENSIONS (mm)

