



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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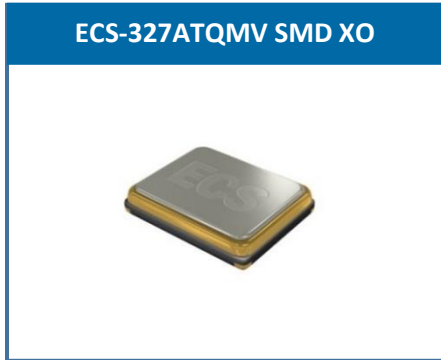
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The ECS-327ATQMV is a miniature 32.768 KHz SMD AEC-Q200 Qualified HCMOS Oscillator with Multi Volt capability of 1.62 ~ 3.63 V. The 3.2 x 2.5 x 0.9 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT. applications.

[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 _{dd} max./VOH:90%V _{dd} min.V DC				
Current Consumption				0.2	mA
Standby Current				20	µA
Rise & Fall time	10%V _{dd} – 90%V _{dd}			100	ns
Start Up Time	@90%V _{dd}			10	mS
Duty Cycle	@ ½ V _{dd}			45/55	%
Operating Temp*		-40		+125	°C
Storage Temp		-55		+125	°C

DIMENSIONS (mm)

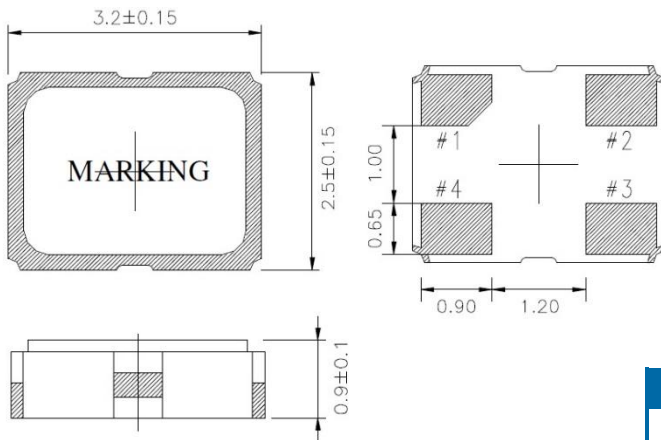


Figure 1) Top, Side, and Bottom views

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

Tri State Function	
Pin 1	Output
0.7 * V _{dd} Min Or NC	Active
0.3 * V _{dd} Max.	High Impedance

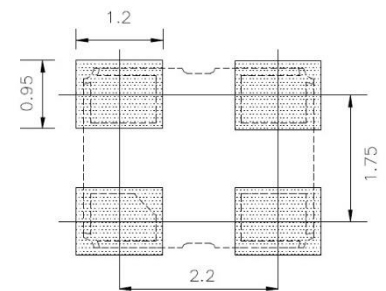


Figure 2) Suggested Land Pattern

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

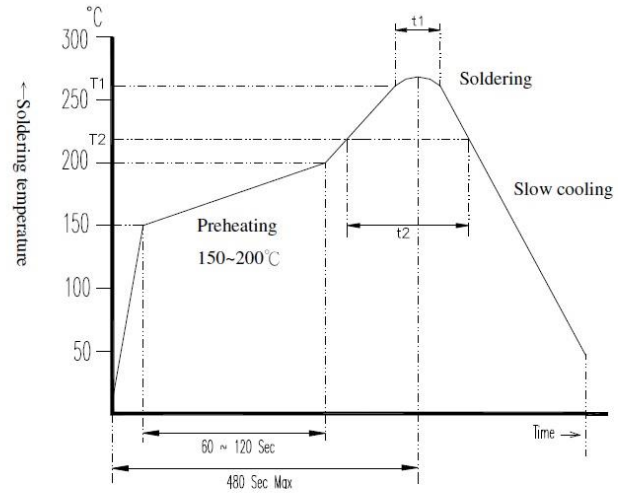
A = ±100 ppm

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)

