

The ECS-327MVATX is a miniature SMD 32.768 kHz Oscillator with MultiVolt™ capability of 1.6 ~ 3.6 V. Available in 5 industry standard Packages the ECS-327MVATX is ideal for RTC, Low Power/Portable, Industrial, and IoT applications.

[Request a Sample](#)

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



- Low Current
- Extended Temp Range
- RoHS Compliant
- MultiVolt™ 1.6 ~ 3.6V Supply Voltage
- Tight Stability
- Compatible with 1.8V, 2.5V or 3.3V Power Supply

PARAMETERS	CONDITIONS	ECS-327MVATX			UNITS
		MIN	TYP	MAX	
Frequency Range			32.768		kHz
* Frequency Stability	-40 ~ +85°C (CN Opt)			±25	ppm
Supply Voltage		1.6		3.6	V
Supply Current				200	µA
Output Load	CMOS			15	pF
Output Voltage	VOH	0.9 Vdd			V
	VOL			0.1 Vdd	V
Tri-State Function	"1" VIH ≥ 0.7* Vdd or **NC = Oscillation				
	"0" VIL ≤ 0.3* Vdd = High Impedance				
Rise & Fall time	10% Vdd – 90% Vdd			30	ns
Start Up Time				5	mS
Phase Jitter (RMS)				1	pS
Duty Cycle	@ ½ Vdd			45/55	%
Standby Current				10	µA
Aging	@ +25°C			±3	ppm
Operating Temp*	(N Opt)	-40		+85	°C
Storage Temp		-55		+125	°C

## PART NUMBERING GUIDE: Example ECS-327MVATX-2-CN-TR

ECS	-	SERIES	PACKAGE SIZE	-	* STABILITY	TEMP RANGE -	PACKAGING
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ECS

327MVATX  
32.768 kHz  
MultiVolt™ Oscillator

1 = 2.0 x 1.6 mm  
2 = 2.5 x 2.0 mm  
3 = 3.2 x 2.5 mm  
5 = 5.0 x 3.2 mm  
7 = 7.0 x 5.0 mm

A = ±100 ppm  
B = ±50 ppm  
C = ±25 ppm  
D = ±20 ppm

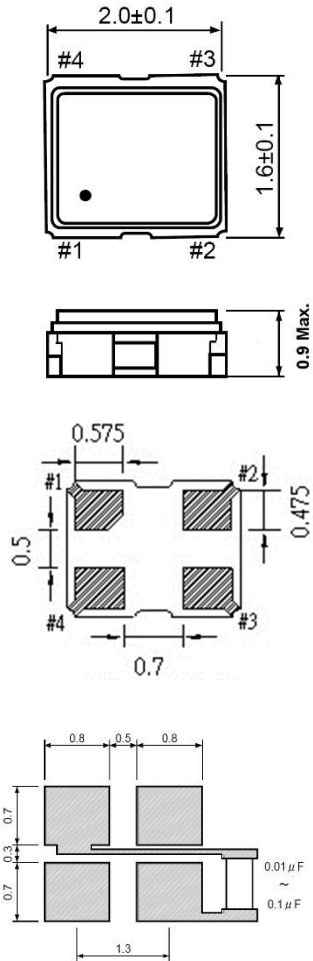
L = -10 ~ +70°C  
M = -20 ~ +70°C  
N = -40 ~ +85°C

-TR = 1K  
-TR3 = 3K  
Qty/Reel

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

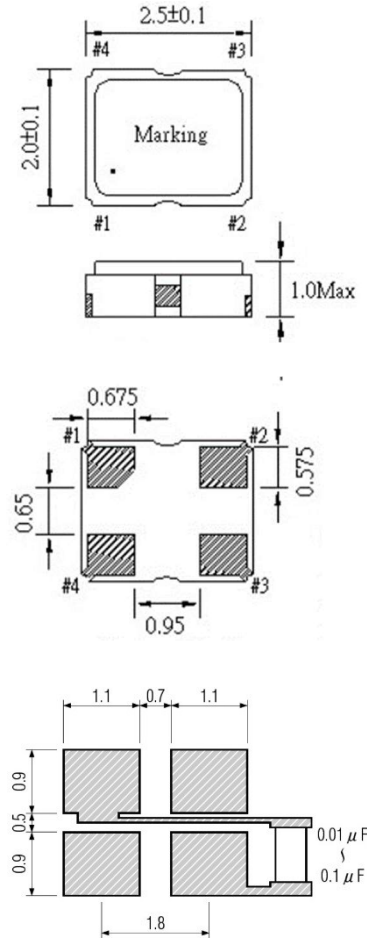
\*\* Internal pullup resistor allows active output if pin 1 is NC

1 = 2.0 x 1.6 Package



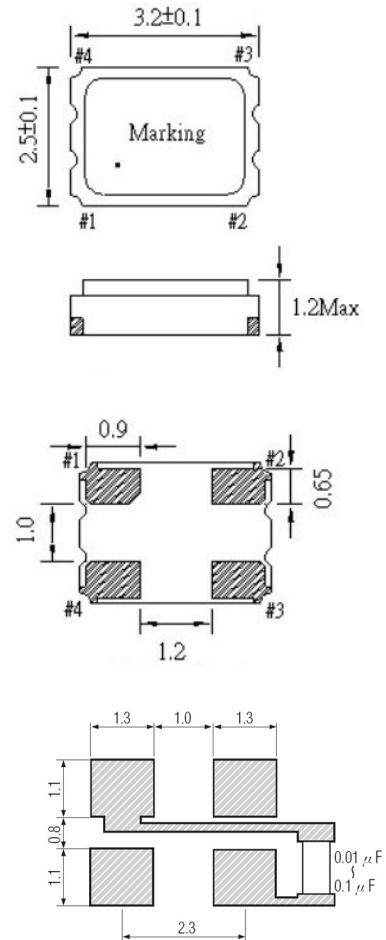
**Figure 1)** Top, Side, Bottom views and Suggested Land

2 = 2.5 x 2.0 Package



**Figure 2)** Top, Side, Bottom views and Suggested Land

3 = 3.2 x 2.5 Package



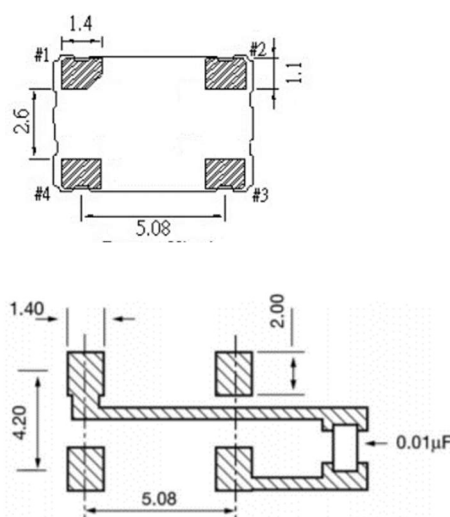
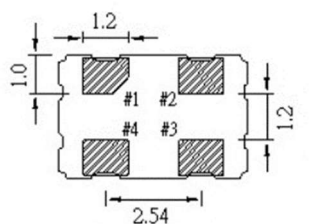
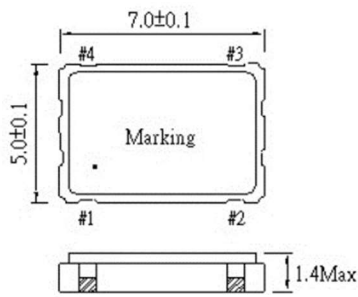
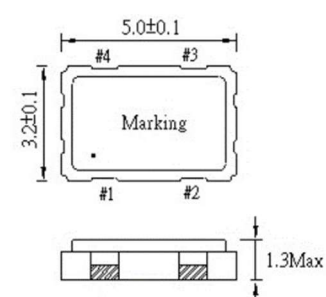
**Figure 3)** Top, Side, Bottom views and Suggested Land

**PAD CONNECTIONS**

1	Tri-state
2	Gnd
3	Output
4	Vdd

5 = 5 x 3.2 Package

7 = 7 x 5 Package



**Figure 4)** Top, Side, Bottom views and Suggested Land

**Figure 5)** Top, Side, Bottom views and Suggested Land

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