

The ECS-2012MV-327KE miniature 32.768 kHz low current consumption MultiVolt™ CMOS Oscillator. The 2.0 x 1.2 x 0.85 mm ceramic package is ideal for Smart Meter, Wearable device, Industrial, and IoT applications.

[Request a Sample](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



- 2.0 x 1.2 mm Footprint
- Low current consumption
- MultiVolt™ Compatible with 1.5V, 1.8V, 2.5V or 3.3V Power Supply

DIMENSIONS (mm)

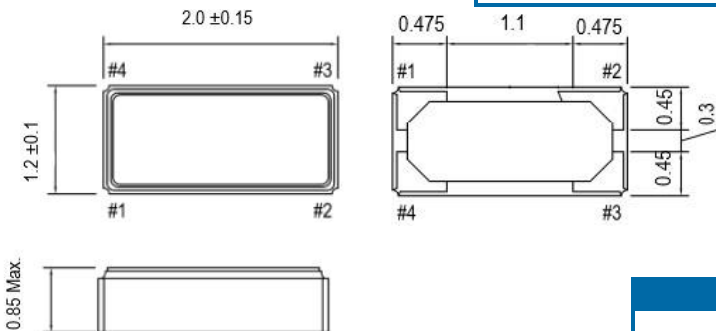


Figure 1) Top, Side, and Bottom views

PARAMETERS	CONDITIONS	ECS-2012MV-327KE			UNITS
		MIN	TYP	MAX	
Frequency			32.768		kHz
Frequency Tolerance	+25°C Vdd =+3.3V			±20	ppm
* Frequency Stability	-20 ~ +70°C	-120		+10	ppm
	-40 ~ +85°C	-150		+10	ppm
Frequency Voltage Coefficient	Per Volt Max.			±1	ppm
Supply Voltage		1.2	3.3	5.5	V
Output Load	CMOS			15	pF
Output voltage Level	VOL: 0.4V max. / VOH Vdd -0.4V min.				
Current Consumption	+3.3V, No Load		0.5	0.8	µA
Standby Current	+1.2V ~ 5.5V No Load		0.25	0.6	µA
Rise & Fall time	10% Vdd – 90% Vdd			130	ns
Start Up Time	+25°C,+3.3V		0.15	0.5	sec
Duty Cycle	@ ½ Vdd			40/60	%
Aging (1 st year)	+25°C, 3.3V			±3	ppm
Operating Temp*		-40		+85	°C
Storage Temp		-55		+125	°C

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

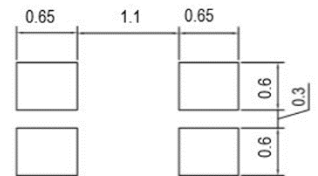


Figure 2) Suggested Land Pattern

Tri State Function	
Pin 1	Output
VDD-0.4 Min.	Active
0.4V Max.	High Impedance
Open	Not Allowed

PART NUMBERING GUIDE: Example ECS-2012MV-327KE-TR

ECS	SERIES	PACKAGING
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ECS

2012MV-327KE
2.0 x 1.2 mm
32.768 KHz
Low current
MultiVolt™ Oscillator

TR = Tape & Reel
4K/Reel

* Frequency Stability referred to +25°C, includes temperature, and reflow frequency shift.

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

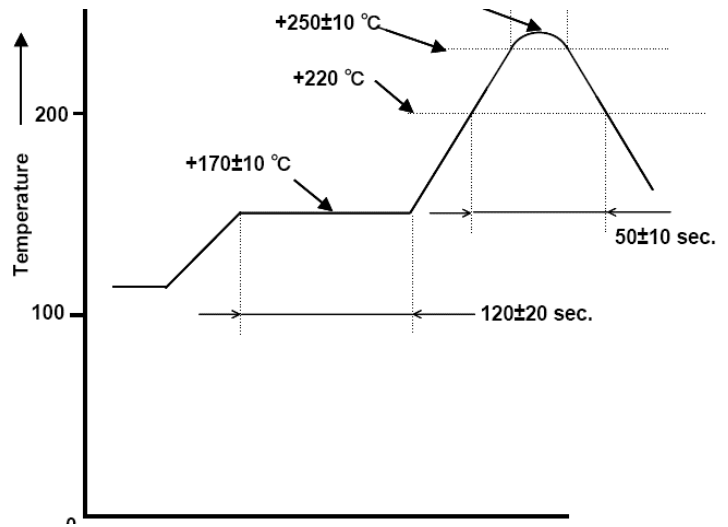


Figure 3) Suggested Reflow Profile

POCKET TAPE DIMENSIONS (mm)

