

The ECS-5032MV is a miniature SMD HCMOS Oscillator with Multi Volt capability of 1.6 ~ 3.6 V. The 5.0 x 3.2 x 1.3 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT.

[Request a Sample](#)



- 5.0 x 3.2 mm Footprint
- Extended Temp Range
- RoHS Compliant
- Wide Supply Voltage
- Low Jitter

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-5032MV			UNITS
		MIN	TYP	MAX	
Frequency Range		0.750		160.00	MHz
* Frequency Stability	-40 ~ +85°C (BN Opt)			±50	ppm
Supply Voltage		1.6		3.6	V
Output Load	CMOS			15	pF
Output voltage Level	Vol:10%V _{dd} max./VoH:90%V _{dd} min.V DC				
Rise & Fall time	10%V _{dd} - 90%V _{dd}			7	ns
Start Up Time	@90%V _{dd}			5	mS
Phase Jitter	12 KHz to 20 MHz			1	pS
Duty Cycle	@ ½ V _{dd}			45/55	%
Standby Current				10	µA
Operating Temp*		-40		+85	°C
Storage Temp		-55		+125	°C

DIMENSIONS (mm)

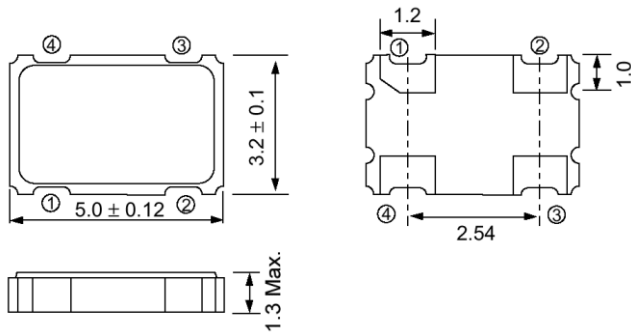


Figure 1) Top, Side, and Bottom views

CURRENT CONSUMPTION mA Max

FREQ.	~ 19 MHz	~ 39.9 MHz	~ 50 MHz	~ 60 MHz	~ 100 MHz	~ 160 MHz
+1.8V	2.5	3.0	3.5	4.0	35.0	40.0
+2.5V	4.5	5.5	6.5	7.0	35.0	40.0
+3.0V	5.5	6.5	7.5	8.0	35.0	40.0
+3.3V	6.0	7.0	8.0	8.5	35.0	40.0

PAD CONNECTIONS	
1	Tri-state
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

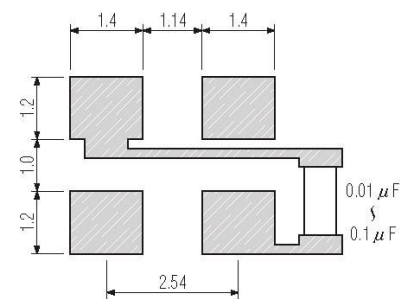


Figure 2) Suggested Land Pattern

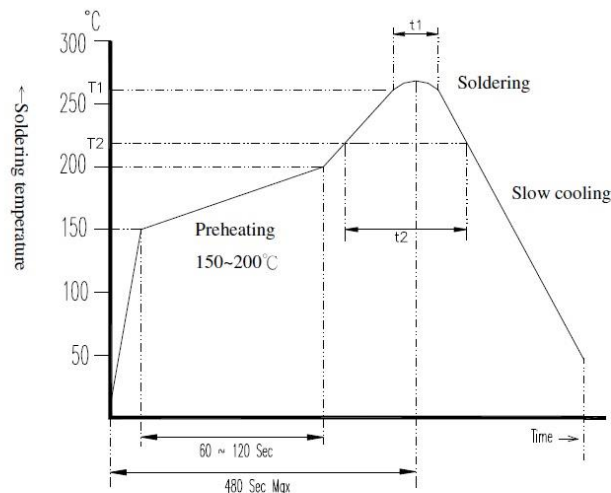
PART NUMBERING GUIDE: Example ECS-5032MV-250-BN-TR

ECS	SERIES	FREQUENCY ABBREVIATION	* STABILITY	TEMP RANGE	PACKAGING
	5032MV 5.0 x 3.2 mm Multi Volt Oscillator	250 = 25.000 MHz See Developed Frequencies Pg.2	A = ±100 ppm B = ±50 ppm C = ±25 ppm D = ±20 ppm	M = -20 ~ +70°C N = -40 ~ +85°C	-TR = Tape & Reel 1K/Reel

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

DEVELOPED FREQUENCIES

FREQUENCY MHz	CODE	FREQUENCY MHz	CODE
8.000	80	32.000	320
10.000	100	33.33333	333.3
12.000	120	371.25	371.2
12.288	122.8	40.000	400
14.31818	143	48.000	480
16.000	160	50.000	500
20.000	200	125.000	1250
24.576	245.7		
25.000	250		
27.000	270		
29.490	294.9		

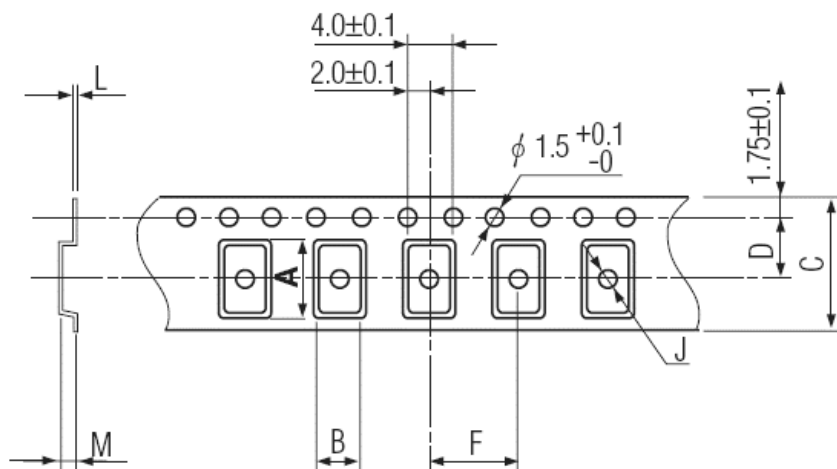


Application\Temperature	Time	T1 / t1	T2 / t2
Lead Free		260±5°C / 10±5 Sec Max	217°C Min / 60~150 Sec
Non Lead Free		240±5°C / 10±5 Sec Max	183°C Min / 60~150 Sec

Figure 1) Suggested Reflow Profile

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

POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
5.25	3.45	12.0	5.5	8.0	2.0	0.3	1.8	178	1000pcs