

The ECS-2016MV is a miniature SMD HCMOS Oscillator with Multi Volt capability of 1.6 ~ 3.6 V. The 2.0 x 1.6 x 0.85 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT.

[Request a Sample](#)



- 2.0 x 1.6 mm Footprint
- Extended Temp Range
- RoHS Compliant
- Wide Supply Voltage
- Low Jitter

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-2016MV			UNITS
		MIN	TYP	MAX	
Frequency Range		1.500		54.000	MHz
* Frequency Stability	-40 ~ +85°C (CN Opt)			±25	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}			6.5	ns
Start Up Time	@90%V _{dd}			5	mS
Phase Jitter	12 KHz to 5 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)

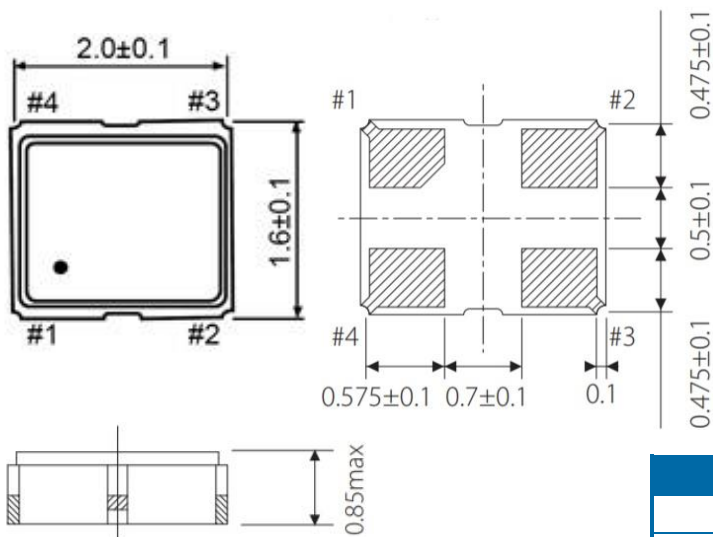


Figure 1) Top, Side, and Bottom views

CURRENT CONSUMPTION mA Max

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

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

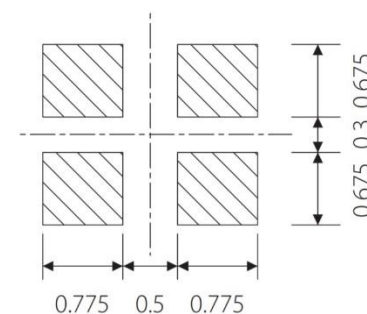


Figure 2) Suggested Land Pattern

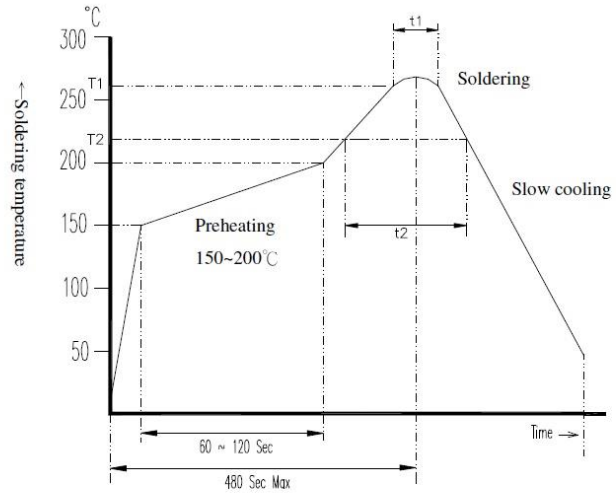
PART NUMBERING GUIDE: Example ECS-2016MV-250-BN-TR

ECS	SERIES	FREQUENCY ABBREVIATION	* STABILITY	TEMP RANGE	PACKAGING
	2016MV 2.0 x 1.6 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
12.000	120
24.000	240
25.000	250
26.000	260
33.3333	333.3
48.000	480
50.000	5000

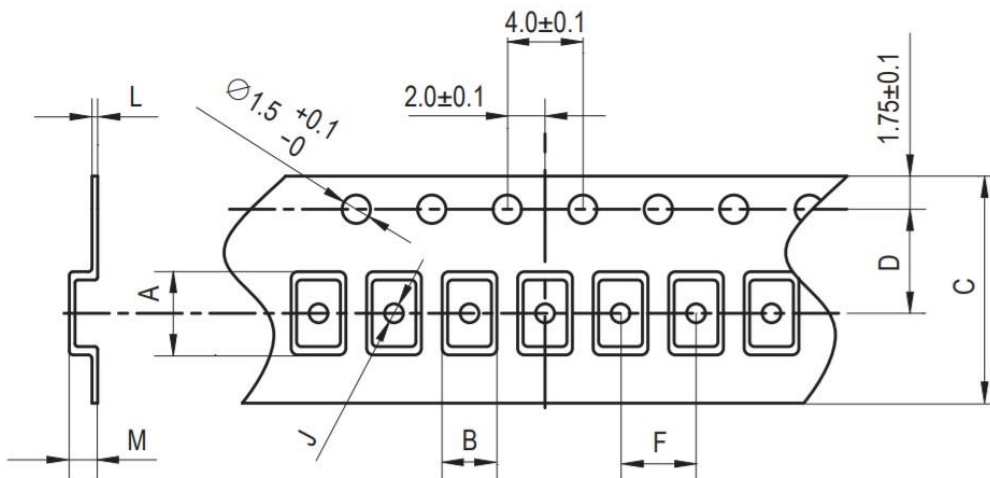


Application\Temperature	Time	T1 / t1	T2 / t2
Lead Free	260±5°C / 10±5 Sec Max	217°C Min / 60~150 Sec	
Non Lead Free	240±5°C / 10±5 Sec Max	183°C Min / 60~150 Sec	

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
2.2	1.8	8.0	3.5	4.0	1.0	0.25	1.0	180	1000pcs