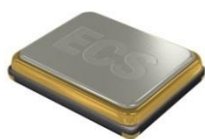


The ECS-2016MV is a miniature SMD HCMOS Oscillator with Multi Volt capability of 1.6 ~ 3.6 V. The 2.0 x 1.6 x 0.85 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT.

[Request a Sample](#)

ECS-2016MV SMD XO



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

DIMENSIONS (mm)

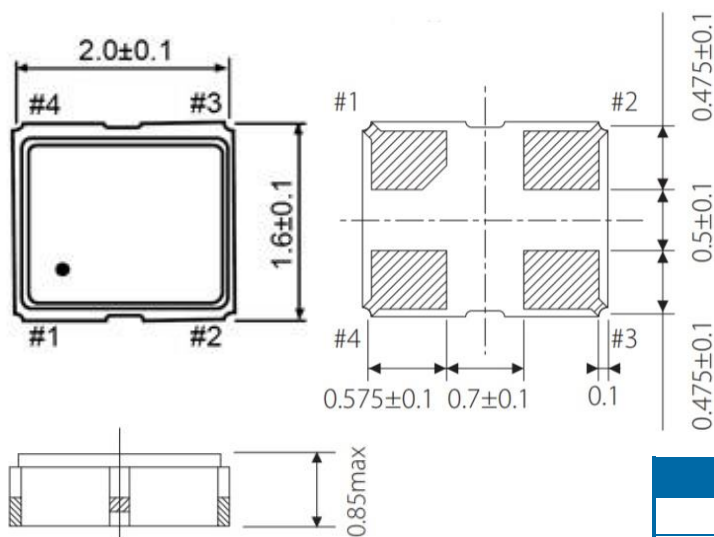


Figure 1) Top, Side, and Bottom views

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

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

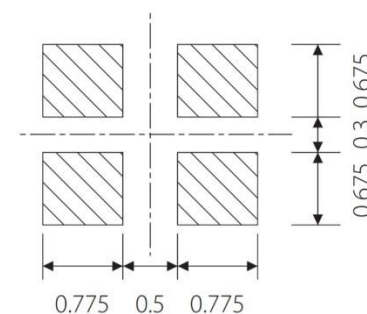


Figure 2) Suggested Land Pattern

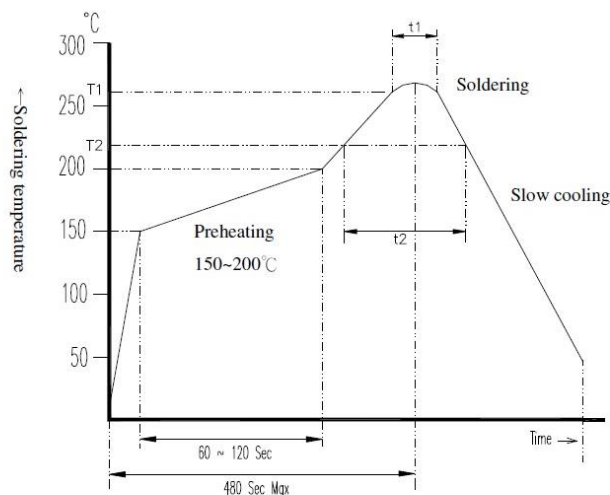
PART NUMBERING GUIDE: Example ECS-2016MV-250-BN-TR

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

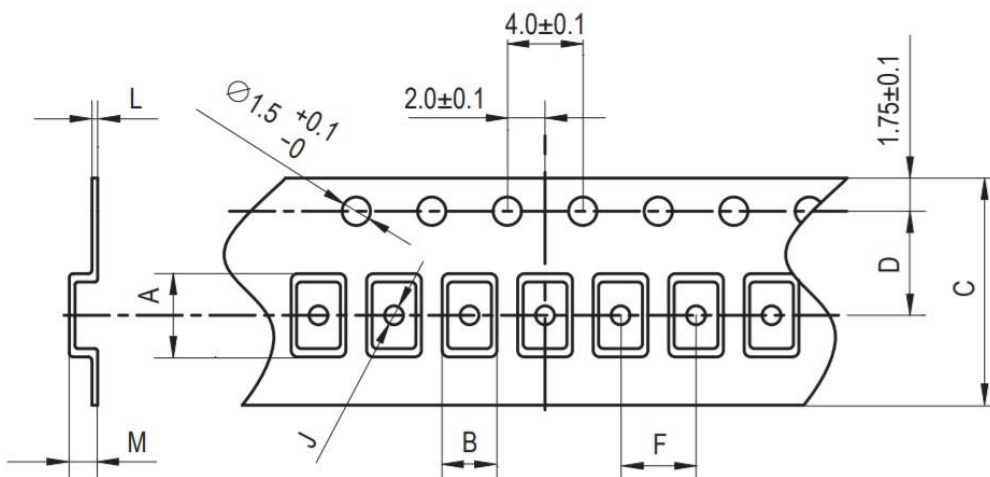


SOLDER PROFILE
Peak solder Temp +260°C ±5°C 10 ±5 Sec Max.
2 Cycles Max.
MSL 1, Lead Finish Au

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)



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