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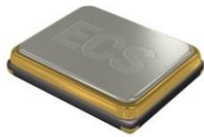


The ECS-2520MV is a miniature SMD HCMOS Oscillator with Multi Volt capability of 1.6 ~ 3.6 V. The 2.5 x 2.0 x 0.8 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT.

# ECS-2520MV SMD Multi Volt Crystal Oscillator

[Request a Sample](#)

## ECS-2520MV SMD XO



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

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-2520MV			UNITS
		MIN	TYP	MAX	
Frequency Range		0.750		60.000	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 <sub>dd</sub> max./VOH:90%V <sub>dd</sub> min.V DC				
Rise & Fall time	10%V <sub>dd</sub> - 90%V <sub>dd</sub>			7	ns
Start Up Time	@90%V <sub>dd</sub>			5	mS
Phase Jitter	12 KHz to 5 MHz			1	pS
Duty Cycle	@ ½ V <sub>dd</sub>			45/55	%
Standby Current				10	µA
Operating Temp*		-40		+85	°C
Storage Temp		-55		+125	°C

## DIMENSIONS (mm)

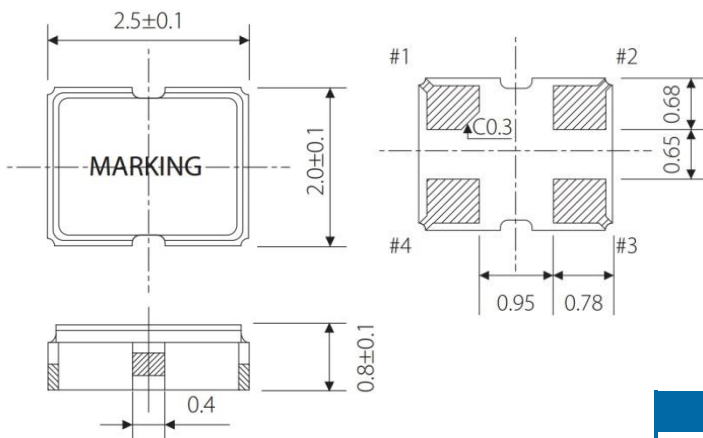


Figure 1) Top, Side, and Bottom views

## 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
+3.0V	5.5	6.5	7.5	8.0
+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 <sub>dd</sub> Min Or NC	Active
0.3 * V <sub>dd</sub> Max.	High Impedance

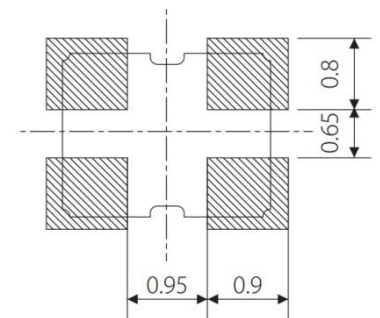


Figure 2) Suggested Land Pattern

## PART NUMBERING GUIDE: Example ECS-2520MV-250-BN-TR

ECS	SERIES	FREQUENCY ABBREVIATION	* STABILITY	TEMP RANGE	PACKAGING
	2520MV 2.5 x 2.0 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 3K/Reel

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



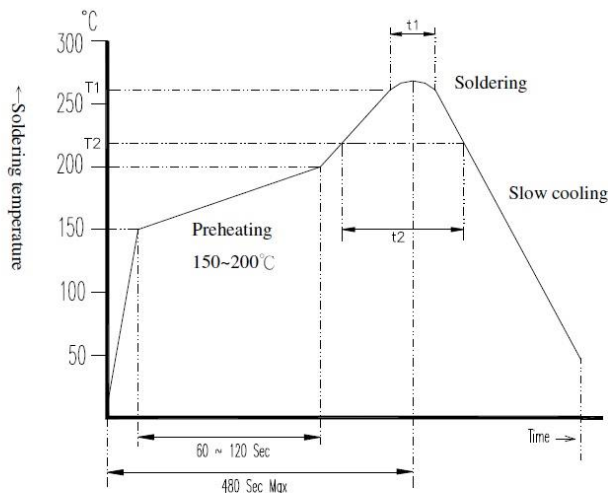


# ECS-2520MV SMD Multi Volt Crystal Oscillator



## 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

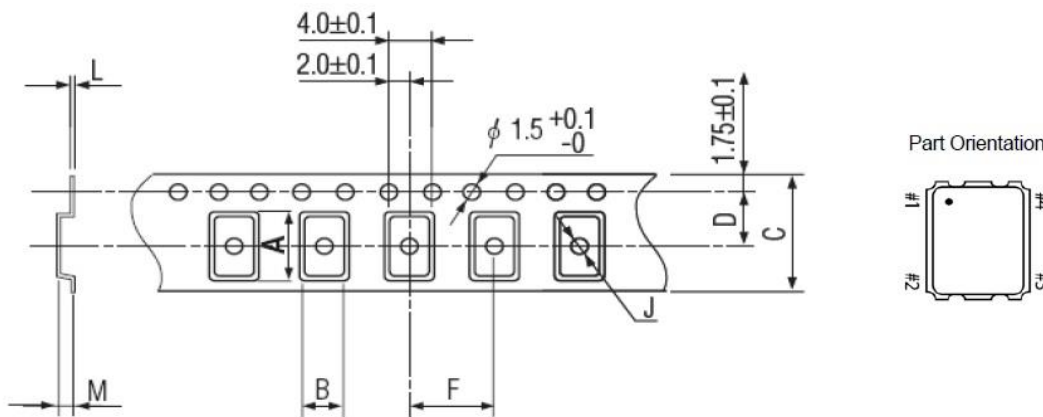


SOLDER PROFILE
Peak solder Temp +260°C ±5°C 10 ±5 Sec Max.
2 Cycles Max.
MSL 1, Lead Finish Au

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
2.8	2.3	8.0	3.5	4.0	1.0	0.25	1.1	180	1000pcs