

The ECS-3225MV is a miniature SMD HCMOS Oscillator with MultiVolt™ capability of 1.62 ~ 3.63 V. The 3.2 x 2.5 x 1.2 mm ceramic package is ideal for LoRa WAN, Low Power/Portable, Industrial, and IoT applications.

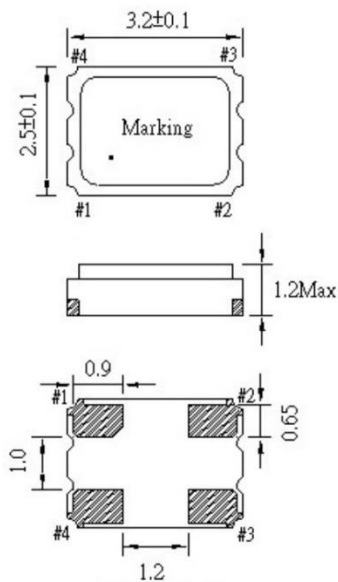
[Request a Sample](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



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

DIMENSIONS (mm)



PARAMETERS	CONDITIONS	ECS-3225MV			UNITS
		MIN	TYP	MAX	
Frequency Range		6.000		50.000	MHz
* Frequency Stability	-40 ~ +85°C (BN Opt)			±50	ppm
Supply Voltage		1.62		3.63	V
Output Load	CMOS			15	pF
Output voltage Level	VOL: 0.2 Vdd max. / VOH: 0.8 Vdd min. V DC				
Rise & Fall time	20% Vdd – 80% Vdd			7	nS
Start Up Time				10	mS
Phase Jitter	12 kHz to 20 MHz			1	pS
Duty Cycle	@ ½ Vdd		45/55		%
Input Current (No Load)	1.000 ~ 9.999 MHz			3	mA
	10.00 ~ 39.999 MHz			4	mA
	40.00 ~ 50.000 MHz			5	mA
Aging	Per year			±3	ppm
Standby Current				10	µA
Operating Temp*		-40		+85	°C
Storage Temp		-55		+125	°C

PAD CONNECTIONS

1	Tri-state
2	Gnd
3	Output
4	Vdd

Tri State Function

Pin 1	Output
0.7 * Vdd Min or NC	Active
0.3 * Vdd Max.	High Impedance

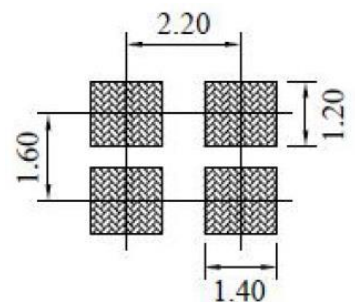


Figure 1) Top, Side, and Bottom views

Figure 2) Suggested Land Pattern

PART NUMBERING GUIDE: Example ECS-3225MV-250-BN-TR

ECS	-	SERIES	-	FREQUENCY ABBREVIATION	-	* STABILITY	-	TEMP RANGE -	-	PACKAGING
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ECS

3225MV
3.2 x 2.5 mm
MultiVolt™ Oscillator

250 = 25.000 MHz
See Developed
Frequencies Pg. 2

A = ±100 ppm
B = ±50 ppm
C = ±25 ppm

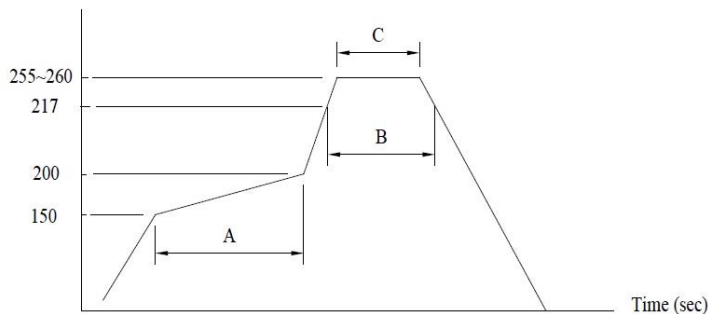
M = -20 ~ +70°C
N = -40 ~ +85°C

-TR = Tape & Reel
1K/Reel

DEVELOPED FREQUENCIES

FREQUENCY MHz	CODE
16.000	160
20.000	200
24.000	240
25.000	250
32.000	320
48.000	480
50.000	500

Temp. (deg.C)



(A)→Preheating area : 150~200°C, 60~120sec.
 (B)→Heating area : 217°C, 60~150sec.
 (C)→Peak temperature : 255~260°C, 30sec. Max.
 Ramp-up rate (217→260°C) : 3°C/sec. Max.
 Ramp-down rate (260→217°C) : 6°C/sec. Max.
 Time 25°C→260°C : 480sec. Max.

*Reference JEDEC J-STD-020

Figure 3) Suggested Reflow Profile

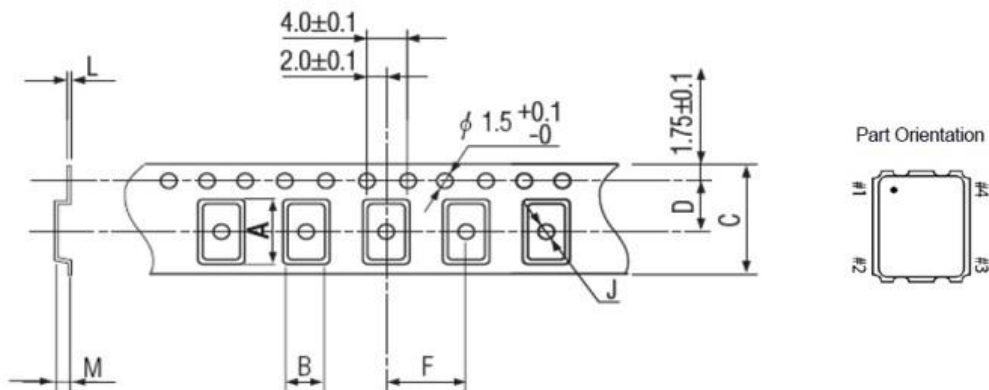
SOLDER PROFILE

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
3.4	2.7	8.0	3.5	4.0	1.0	0.25	1.4	178	1000pcs