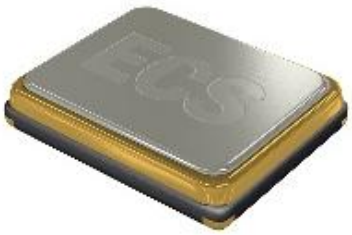
ECS-3225MV

SMD MultiVolt™ Crystal Oscillator

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

ECS-3225MV SMD XO



- 3.2 x 2.5 mm Footprint
- Extended Temp Range
- RoHS Compliant
- Wide Supply Voltage
- Low Jitter
- Compatible with 1.8V, 2.5V or 3.3V Power Supply

DIMENSIONS (mm)

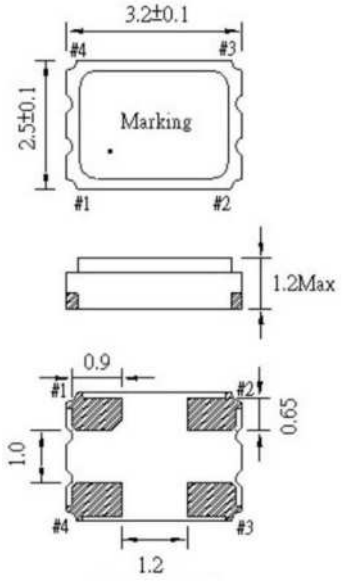


Figure 1) *Top, Side, and Bottom views*

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-3225MV			UNITS
		MIN	TYP	MAX	
Frequency Range		1.8432		160.00	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 ~ 66.000 MHz			5	mA
	66.1 ~ 160 MHz			40	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

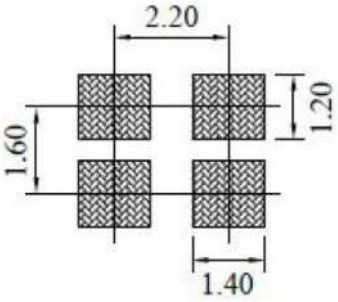


Figure 2) *Suggested Land Pattern*

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

ECS -	SERIES	FREQUENCY ABBREVIATION -	* STABILITY	TEMP RANGE -	PACKAGING
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 P = -40 ~ +105°C	TR = 1K TR3 = 3K Qty/Reel

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

Rev. 2026

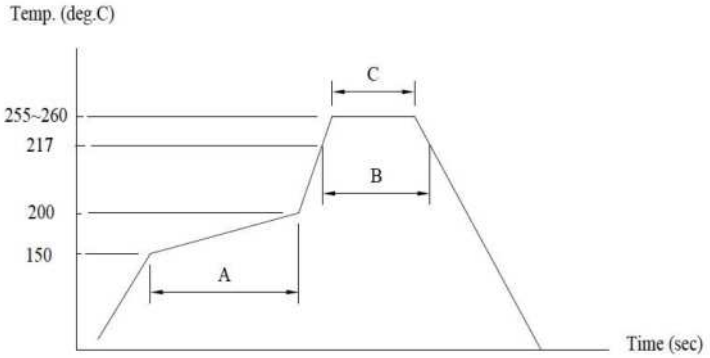
15351 West 109th Street | Lenexa, KS 66219 | Phone: 913.782.7787 | Fax: 913.782.6991 | www.ecsxtal.com

ECS-3225MV

SMD MultiVolt™ Crystal Oscillator

DEVELOPED FREQUENCIES

FREQUENCY MHz	CODE
1.8432	018
4.000	040
8.000	080
10.000	100
12.000	120
14.7456	147.4
16.000	160
20.000	200
24.000	240
25.000	250
26.000	260
27.000	270
29.4912	294.9
30.000	300
32.000	320
33.333	333.3
36.000	360
48.000	480
49.152	491.52
50.000	500
100.000	1000
125.000	1250

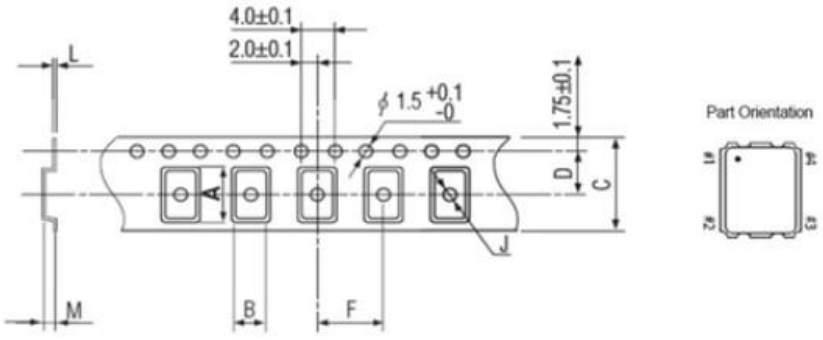


(A)→Preheating area : 150~200°C, 60~120sec.
(B)→Heating area : 217°C, 60~150sec.
(C)→Peak temperature : 255~260°C, 30sec. Max.
Ramp-up rate (217→260°C) : 3°C/sec. Max.
Ramp-down rate (260→217°C) : 6°C/sec. Max.
Time 25°C→260°C : 480sec. Max.
*Referance JEDEC J-STD-020

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.
3.4	2.7	8.0	3.5	4.0	1.0	0.25	1.4	178