ECS-5032SMV

SMD MultiVolt™ Crystal Oscillator
Tight Stability

RoHS COMPLIANT

The ECS-5032SMV is a miniature SMD HCMOS Oscillator with MultiVolt™ capability of 1.68 ~ 3.63 V with a tight stability of ±5 or ±10 ppm. The 5.0 x 3.2 x 1.3 mm ceramic package is ideal for Low Power/Portable, Industrial, and IoT applications.

Request a Sample

ECS INC INTERNATIONAL®

ECS-5032SMV SMD XO

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

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-5032SMV			UNITS
		MIN	TYP	MAX	
Frequency Range		8.000		60.000	MHz
* Frequency Stability	-40 ~ +105°C (FP Opt)			±10	ppm
Supply Voltage		1.68		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			5	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)			6	10	mA
Standby Current				10	µA
Operating Temp*	P Option	-40		+105	°C
Storage Temp		-55		+125	°C

DIMENSIONS (mm)

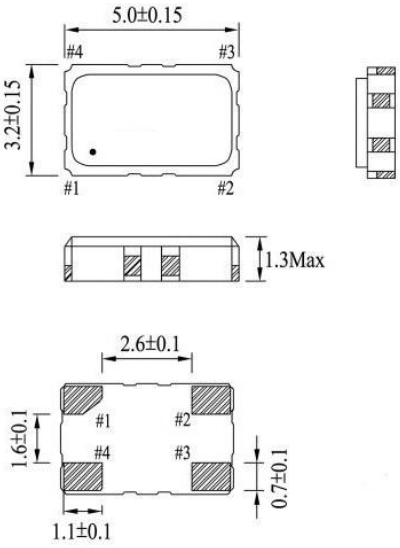

Figure 1) *Top, Side, and Bottom views*

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

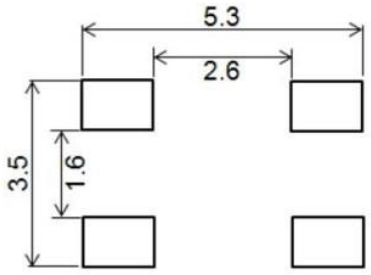

Figure 2) *Suggested Land Pattern*

PART NUMBERING GUIDE: Example ECS-5032SMV-250-FP-TR

ECS	-	SERIES	FREQUENCY ABBREVIATION	-	* STABILITY	TEMP RANGE -	PACKAGING
ECS		5032SMV 5.0 x 3.2 mm MultiVolt™ Oscillator Tight Stability	250 = 25.000 MHz See Developed Frequencies Pg. 2		F= ±10 ppm G = ±5 ppm	N = -40 ~ +85°C P = -40 ~ +105°C	-TR = Tape & Reel 1K/Reel

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

Rev. 2026

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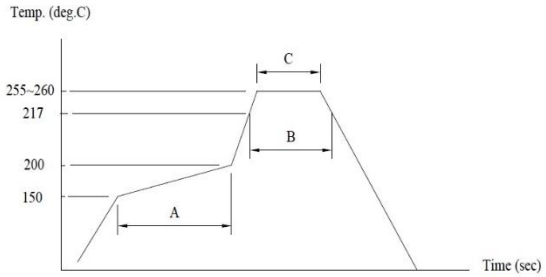
DEVELOPED FREQUENCIES

FREQUENCY MHz	CODE
8.000	080
10.000	100
12.000	120
16.000	160
25.000	250
40.000	400
50.000	500

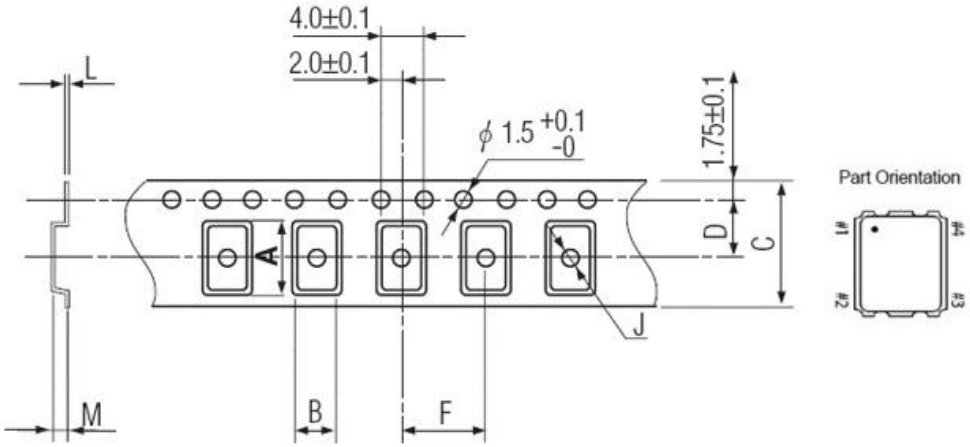
SOLDER PROFILE
Peak solder Temp +260°C ±5°C 10 ±5 Sec Max.
2 Cycles Max.
MSL 1, Lead Finish Au



(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*

POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
5.25	3.45	12.0	5.5	8.0	2.0	0.3	1.8	178	1000pcs