

The ECS-2016MV is a miniature SMD HCMOS Oscillator with MultiVolt™ capability of 1.6 ~ 3.6 V. The 2.0 x 1.6 x 0.85 mm ceramic package is ideal for LoRa WAN, Low Power/Portable, Industrial and IoT applications.

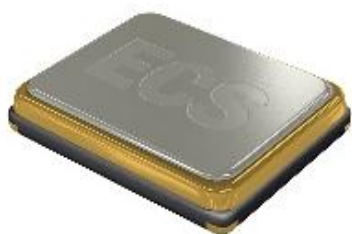
ECS-2016MV

SMD MultiVolt™ Crystal Oscillator

[Request a Sample](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

ECS-2016MV SMD XO



- 2.0 x 1.6 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)

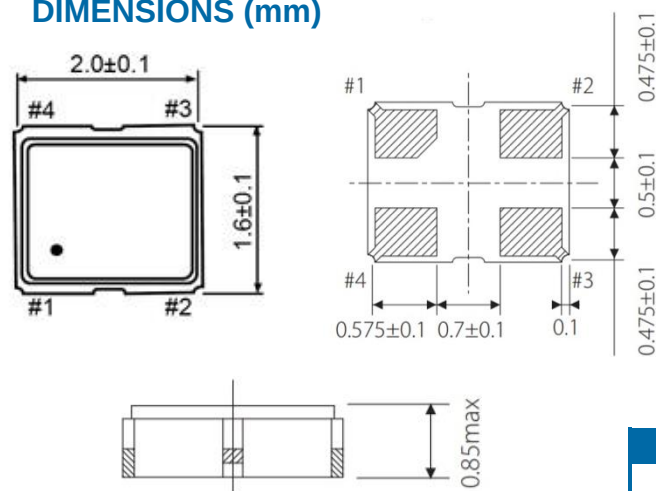


Figure 1) Top, Side, and Bottom views

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 * Vdd Min or NC	Active
0.3 * Vdd Max.	High Impedance

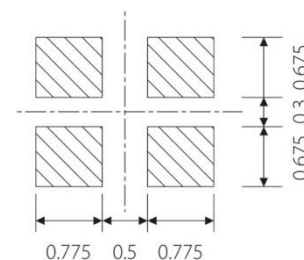


Figure 2) Suggested Land Pattern

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

ECS	SERIES	FREQUENCY ABBREVIATION	* STABILITY	TEMP RANGE -	PACKAGING
ECS	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 G= ±30 ppm ‡ C= ±25 ppm ‡ D = ±20 ppm	M = -20 ~ +70°C N = -40 ~ +85°C P = -40 ~ +105°C	-TR = 1K -TR3=3K Qty/Reel

‡ Contact ECS for availability over extended temp.

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

Rev. 2025

DEVELOPED FREQUENCIES

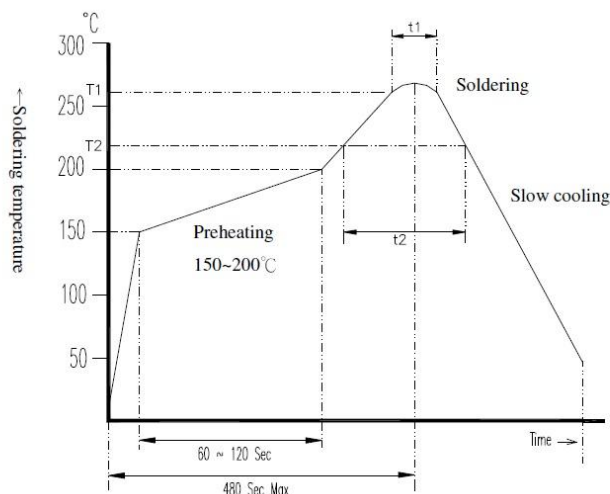
FREQUENCY MHz	CODE
8.000	080
10.000	100
12.000	120
16.000	160
24.000	240
25.000	250
26.000	260
33.3333	333.3
48.000	480
50.000	500

SOLDER PROFILE

Peak solder Temp $+260^{\circ}\text{C} \pm 5^{\circ}\text{C}$
10 $\pm$ 5 Sec Max.

2 Cycles Max.

MSL 1, Lead Finish Au



Application / Temperature Time	T1 / t1	T2 / t2
Lead Free	$260 \pm 5^{\circ}\text{C} / 10 \pm 5 \text{ Sec Max.}$	$217^{\circ}\text{C Min} / 60 \sim 150 \text{ Sec}$
Non-Lead Free	$260 \pm 5^{\circ}\text{C} / 10 \pm 5 \text{ Sec Max.}$	$183^{\circ}\text{C Min} / 60 \sim 150 \text{ Sec}$

Figure 3) Suggested Reflow Profile

POCKET TAPE DIMENSIONS (mm)

