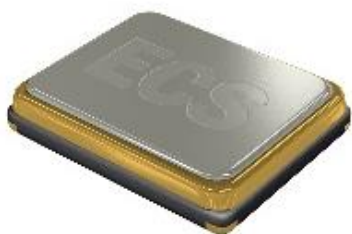


The ECS-3225MVQ is a miniature SMD HCMOS Oscillator AEC-Q200 Qualified with MultiVolt™ capability of 1.7 ~ 3.6 V. The 3.2 x 2.5 x 1.2 mm ceramic package is ideal for Low Power/Portable, Industrial, and Automotive applications.

[Request a Sample](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

ECS-3225MVQ SMD XO



- 3.2 x 2.5 mm Footprint
- AEC-Q200 Qualified
- Extended Temp Range
- Wide Supply Voltage
- Low Jitter

DIMENSIONS (mm)

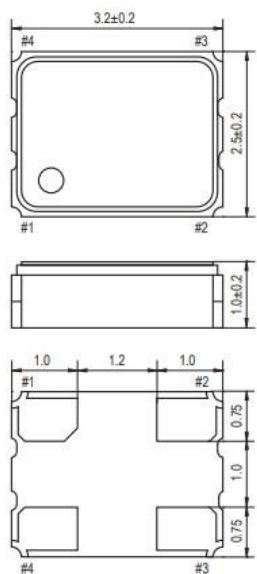


Figure 1) Top, Side, and Bottom views

PARAMETERS	CONDITIONS	ECS-3225MVQ			UNITS
		MIN	TYP	MAX	
Frequency Range		1.000		160.000	MHz
Frequency Stability (1)	-40 ~ +125°C (AS Opt)			±100	ppm
Supply Voltage		1.7		3.6	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			8	mA
	10.00 ~ 39.999 MHz			10	mA
	40.00 ~ 50.000 MHz			12	mA
	50.10 ~ 160.00 MHz			20	mA
Aging	Per year			±3	ppm
Standby Current				10	µA
Operating Temp*		-40		+125	°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

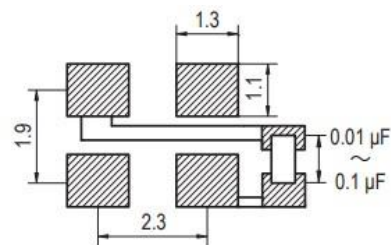


Figure 2) Suggested Land Pattern

PART NUMBERING GUIDE: Example ECS-3225MVQ-250-AS-TR

ECS	-	SERIES	FREQUENCY ABBREVIATION	-	STABILITY (1)	TEMP RANGE -	PACKAGING
-----	---	--------	------------------------	---	---------------	--------------	-----------

ECS

3225MVQ
AEC-Q200
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 (2)
D = ±20 ppm (2)

M = -20 ~ +70°C
N = -40 ~ +85°C
P = -40 ~ +105°C
S = -40 ~ +125°C

-TR = 1K/Reel
-TR3 = 3K/Reel
Qty/Reel

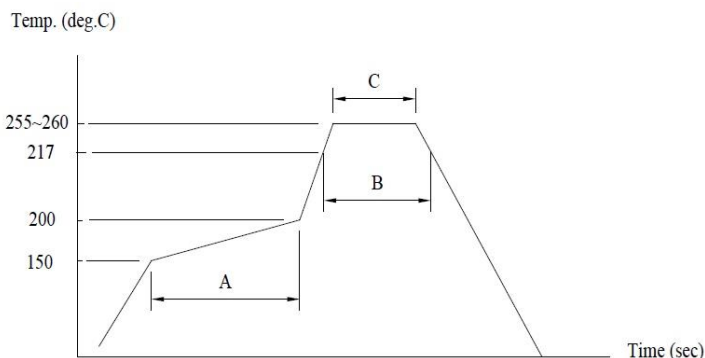
Notes (1) Frequency Stability includes initial tolerance, temperature, supply voltage load change and reflow frequency shift.
(2) Contact ECS for availability.

DEVELOPED FREQUENCIES

FREQUENCY MHz	CODE
8.000	080
16.000	160
20.000	200
24.000	240
25.000	250
32.000	320
48.000	480
50.000	500
100.000	1000
125.000	1250

SOLDER PROFILE

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

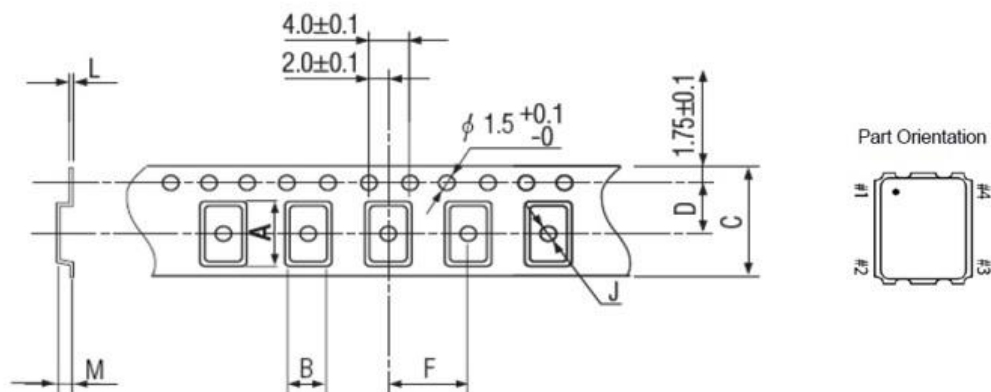


(A)→Preheating area : 150~200°C, 60~120sec.
 (B)→Heating area : 217°C, 60~150sec.
 (C)→Peak temperature : 255~260°C, 30sec. Max.
 Ramp-up rate (217→260°C) : 3°C/sec. Max.
 Ramp-down rate (260→217°C) : 6°C/sec. Max.
 Time 25°C→260°C : 480sec. Max.

*Reference 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
3.4	2.7	8.0	3.5	4.0	1.0	0.25	1.4	178	1000pcs

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ECS:](#)

[ECS-3225MVQ-120-BP-TR](#) [ECS-3225MVQ-240-CN-TR](#) [ECS-3225MVQ-500-CN-TR](#) [ECS-3225MVQ-250-CN-TR](#)
[ECS-3225MVQ-160-BP-TR](#) [ECS-3225MVQ-500-BP-TR](#) [ECS-3225MVQ-1000-CN-TR](#) [ECS-3225MVQ-250-BP-TR](#)
[ECS-3225MVQ-320-CN-TR](#) [ECS-3225MVQ-320-BP-TR](#) [ECS-3225MVQ-480-BP-TR](#) [ECS-3225MVQ-160-CN-TR](#)
[ECS-3225MVQ-240-BP-TR](#) [ECS-3225MVQ-120-CN-TR](#) [ECS-3225MVQ-480-CN-TR](#) [ECS-3225MVQ-1250-CN-TR](#)
[ECS-3225MVQ-080-BP-TR](#) [ECS-3225MVQ-1000-CN-TR3](#) [ECS-3225MVQ-500-CN-TR3](#) [ECS-3225MVQ-250-BS-TR](#)
[ECS-3225MVQ-160-BS-TR](#)