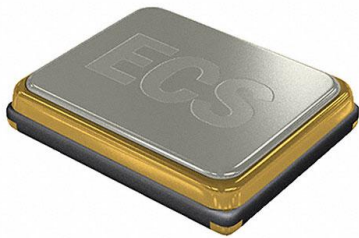


# ECS-3225SMV-200-FN-TR Datasheet

[www.digi-electronics.com](http://www.digi-electronics.com)



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	ECS-3225SMV-200-FN-TR-DG
Manufacturer	<a href="#">ECS Inc.</a>
Manufacturer Product Number	ECS-3225SMV-200-FN-TR
Description	XTAL OSC XO 20MHZ HCMOS SMD
Detailed Description	20 MHz XO (Standard) CMOS Oscillator 1.62V ~ 3.63 V Enable/Disable 4-SMD, No Lead



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

ECS-3225SMV-200-FN-TR

Series:

ECS-3225SMV MultiVolt™

Base Resonator:

Crystal

Frequency:

20 MHz

Output:

CMOS

Frequency Stability:

±10ppm

Operating Temperature:

-40°C ~ 85°C

Current - Supply (Max):

10mA

Mounting Type:

Surface Mount

Size / Dimension:

0.126" L x 0.098" W (3.20mm x 2.50mm)

Current - Supply (Disable) (Max):

10µA

Manufacturer:

ECS Inc.

Product Status:

Active

Type:

XO (Standard)

Function:

Enable/Disable

Voltage - Supply:

1.62V ~ 3.63V

Absolute Pull Range (APR):

-

Spread Spectrum Bandwidth:

-

Ratings:

-

Package / Case:

4-SMD, No Lead

Height - Seated (Max):

0.047" (1.20mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

# ECS-3225SMV

SMD MultiVolt™ Crystal Oscillator  
Tight Stability


[Request a Sample](#)

The ECS-3225SMV is a miniature SMD HCMOS Oscillator with MultiVolt™ capability of 1.62 ~ 3.63 V with a tight stability of  $\pm 5$  or  $\pm 10$  ppm. The 3.2 x 2.5 x 1.2 mm ceramic package is ideal for Low Power/Portable, Industrial, and IoT applications.

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



ECS-3225SMV 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)

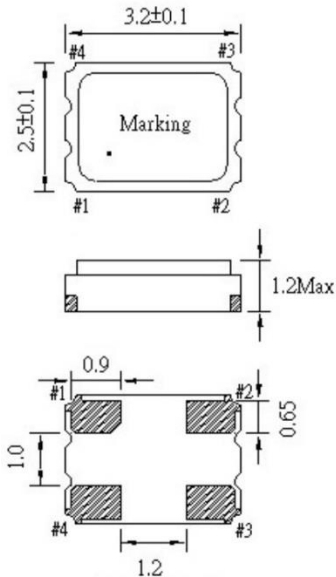


Figure 1) Top, Side, and Bottom views

PARAMETERS	CONDITIONS	ECS-3225SMV			UNITS
		MIN	TYP	MAX	
Frequency Range		8.000		60.000	MHz
* Frequency Stability	-40 ~ +105°C (FP Opt)			$\pm 10$	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			5	nS
Start Up Time				10	mS
Phase Jitter	12 kHz to 20 MHz			1	pS
Duty Cycle	@ 1/2 Vdd		45/55		%
Input Current (No Load)			6	10	mA
Standby Current				10	$\mu$ A
Operating Temp*	P Option	-40		+105	°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

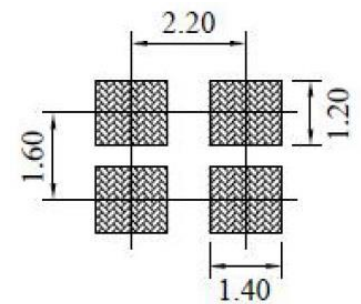


Figure 2) Suggested Land Pattern

## PART NUMBERING GUIDE: Example ECS-3225SMV-250-FP-TR

ECS	SERIES	FREQUENCY ABBREVIATION	* STABILITY	TEMP RANGE -	PACKAGING
ECS	3225SMV 3.2 x 2.5 mm MultiVolt™ Oscillator Tight Stability	250 = 25.000 MHz See Developed Frequencies Pg. 2	F = $\pm 10$ ppm G = $\pm 5$ 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. 2019



# ECS-3225SMV

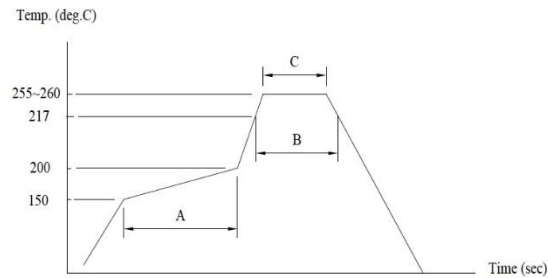
SMD MultiVolt™ Crystal Oscillator  
Tight Stability



## DEVELOPED FREQUENCIES

FREQUENCY MHz	CODE
8.000	80
10.000	100
11.0592	110.5
12.000	120
16.000	160
19.200	192
20.000	200
24.000	240
25.000	250
26.000	260
27.000	270
32.000	320
33.000	330
33.333	333.3
48.000	480
50.000	500

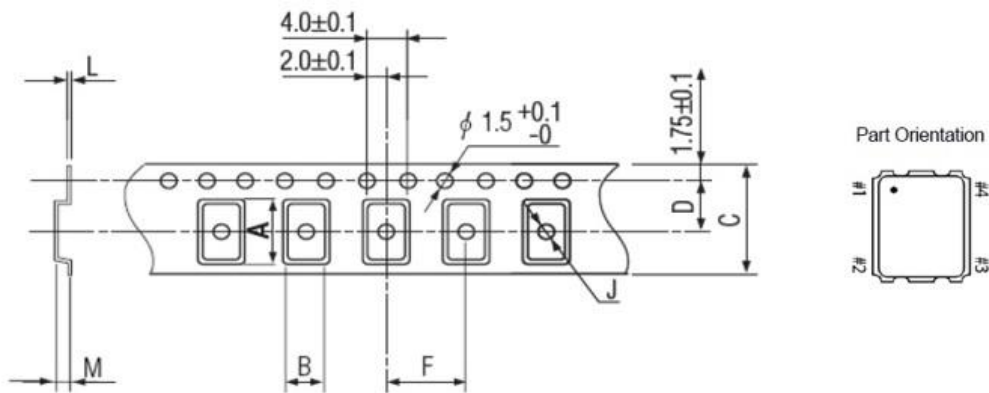
SOLDER PROFILE
Peak solder Temp +260°C ±5°C 10 ±5 Sec Max.
2 Cycles Max.
MSL 1, Lead Finish Au



(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.  
 \*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

## OUR CERTIFICATE

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