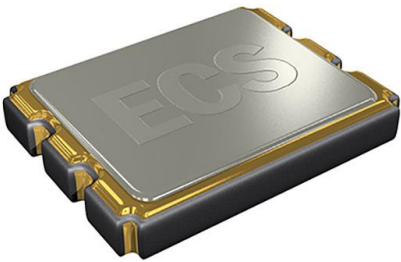


# ECS-2520SMV-330-FN-TR Datasheet

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



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

DiGi Electronics Part Number	ECS-2520SMV-330-FN-TR-DG
Manufacturer	<a href="#">ECS Inc.</a>
Manufacturer Product Number	ECS-2520SMV-330-FN-TR
Description	XTAL OSC XO 33MHZ HCMOS SMD
Detailed Description	33 MHz XO (Standard) HCMOS Oscillator 1.62V ~ 3.6 3V 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-2520SMV-330-FN-TR

Series:

ECS-2520SMV MultiVolt™

Base Resonator:

Crystal

Frequency:

33 MHz

Output:

HCMOS

Frequency Stability:

±10ppm

Operating Temperature:

-40°C ~ 85°C

Current - Supply (Max):

10mA

Mounting Type:

Surface Mount

Size / Dimension:

0.098" L x 0.079" W (2.50mm x 2.00mm)

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):

0.035" (0.90mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99





# ECS-2520SMV

SMD Multi Volt™ Crystal Oscillator  
Tight Stability



The ECS-2520SMV is a miniature SMD HCMOS Oscillator with Multi Volt™ capability of 1.62 ~ 3.63 V with a tight stability of ±5 or ±10 ppm. The 2.5 x 2.0 x 1.0 mm ceramic package is ideal for Low Power/Portable, Industrial and IOT, applications.

Request a Sample

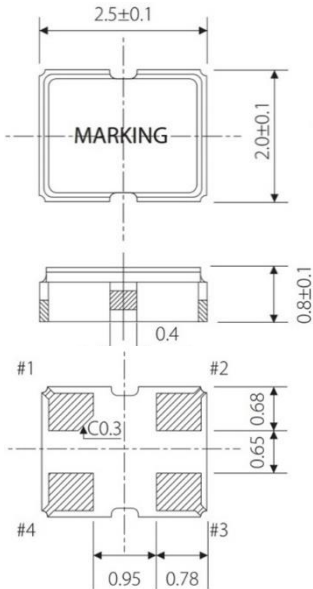


- 2.5 x 2.0 mm Footprint
- Extended Temp Range
- RoHS Compliant
- Wide Supply Voltage
- Tight Stability
- Compatible with 1.8V, 2.5V or 3.3V Power Supply

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-2520SMV			UNITS
		MIN	TYP	MAX	
Frequency Range		8.000		60.000	MHz
* Frequency Stability	-40 ~ +105°C (FP Opt)			±10	ppm
Supply Voltage		1.62		3.63	V
Output Load	CMOS			15	pF
Output voltage Level	VOL: 0.2 V <sub>dd</sub> max./VOH:0.8V <sub>dd</sub> min.V DC				
Rise & Fall time	20%V <sub>dd</sub> – 80%V <sub>dd</sub>			3	nS
Start Up Time				10	mS
Phase Jitter	12 KHz to 20 MHz			1	pS
Duty Cycle	@ ½ V <sub>dd</sub>		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)



PAD CONNECTIONS	
1	Tri-state
2	Gnd
3	Output
4	Vdd

Tri State Function	
Pin 1	Output
0.7 * V <sub>dd</sub> Min OR NC	Active
0.3 * V <sub>dd</sub> Max.	High Impedance

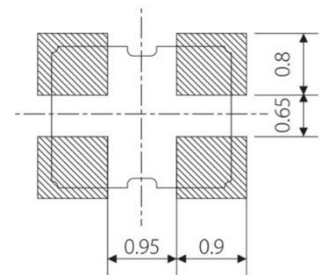


Figure 2) Suggested Land Pattern

Figure 1) Top, Side, and Bottom views

## PART NUMBERING GUIDE: Example ECS-2520SMV-250-FP-TR

ECS	-	SERIES	FREQUENCY ABBREVIATION	-	* STABILITY	TEMP RANGE -	PACKAGING
		2520SMV 2.5 x 2.0 mm Multi Volt 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 & load change reflow frequency shift, and aging.



# ECS-2520SMV SMD Multi Volt™ Crystal Oscillator



## DEVELOPED FREQUENCIES

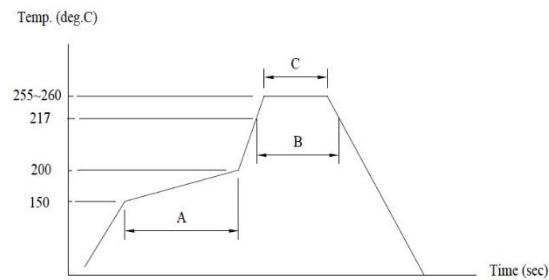
FREQUENCY MHz	CODE
8.000	080
10.000	100
11.0592	110.5
12.000	120
16.000	160
19.200	192
20.000	200
24.000	240
24.576	245.7
25.000	250
26.000	260
27.000	270
30.000	300
32.000	320
33.000	330
33.333	333.3
38.400	384
40.000	400
48.000	480
50.000	500

## SOLDER PROFILE

Peak solder Temp +260°C ±5°C 10 ±5 Sec Max.

2 Cycles Max.

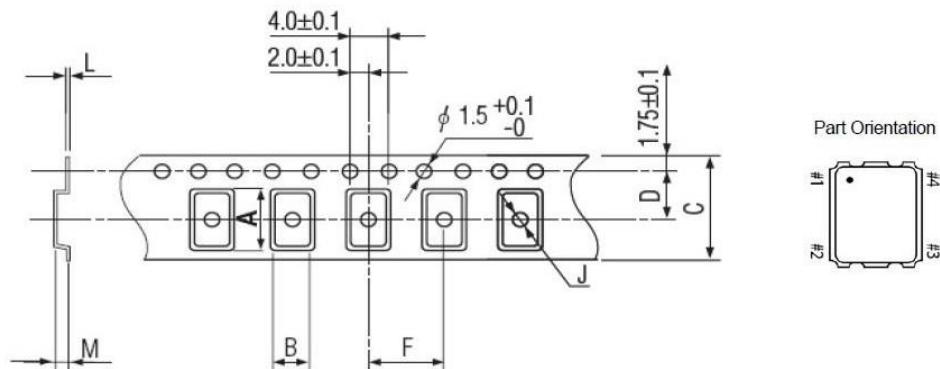
MSL 1, Lead Finish Au



(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 1) Suggested Reflow Profile

## POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
2.8	2.3	8.0	3.5	4.0	1.0	0.25	1.1	180	1000pcs



## OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

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



Tel: +00 852-30501935

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

DiGi is a global authorized distributor of electronic components.