

- ▶ Smallest VCXO in Industry
- ▶ 3.2 x 2.5 mm Footprint
- ▶ Low current consumption
- ▶ Pb Free/RoHS Compliant

# ECS-2532VXO

## SMD VCXO

ECS-2532VXO offers a 2.8V and 3.3V version, subminiature SMD VCXO. Ideal for today's high density applications.

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-2532VXO (+2.8V)			ECS-2532VXO (+3.3V)			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		2.000		54.000	2.000		54.000	MHz
Operating Temperature	Standard	-10		+70	-10		+70	°C
Storage Temperature		-40		+85	-40		+85	°C
Supply Voltage	VDD	+2.66	+2.8	+2.94	+3.135	+3.3	+3.465	VDC
Frequency Stability * Vco = 1/2 VDD	Option A			± 50			± 50	ppm
	Option B			± 30			± 30	ppm
Frequency vs. Input Voltage	VDD ±5%			± 5			± 5	ppm
Frequency Pulling Range		± 90			± 90			ppm
Control Voltage	Vcon = Pin#1	0	+1.4	+2.8	0	+1.65	+3.3	VDC
Frequency Slope	Positive							
Frequency Linearity				15			15	%
Modulation bandwidth	-3 dB	10			10			KHz
Vcon input impedance	Vcon-GND	100K			100K			Ω
Output Symmetry	@ 50% VDD level			40/60			60/40	%
Rise and Fall Times 20% to 80% VDD level	2.0 MHz to 10.0 MHz			10			10	ns
	10.1 MHz to 54.0 MHz			6			6	ns
"0" level	VOL			10% VDD			10% VDD	VDC
"1" level	VOH	90% VDD			90% VDD			VDC
Output Load	CMOS			15			15	pF
Startup time				10			10	ms
Input Current	No Load			5			8	mA
SSB Phase Noise	at 1 KHz offset			-120			-120	dBc/Hz
Aging (first year)	at +25°C ±3°C			± 5			± 5	ppm

### DIMENSIONS (mm)

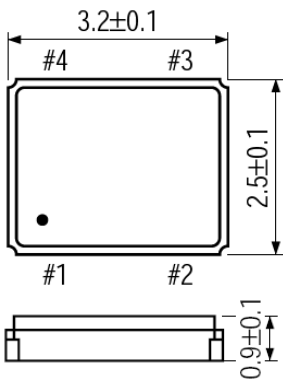


Figure 1) Top, Side and Bottom views

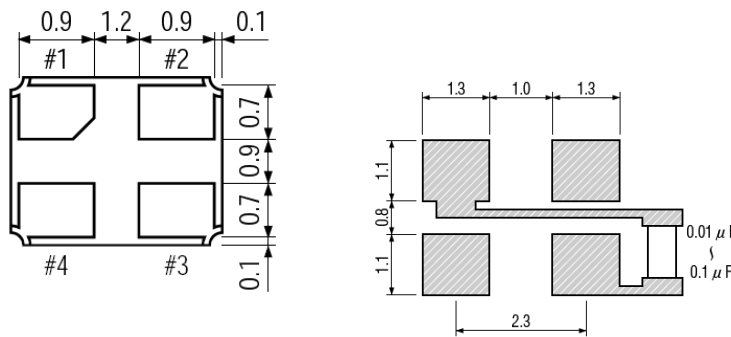


Figure 2) Suggested Land Pattern

Pin Connections	
Pin #1	Vcontrol
Pin #2	GND
Pin #3	Output
Pin #4	VDD

### PART NUMBERING GUIDE: Example ECS-2532VXO-270B-2.8

ECS	Series	Frequency Abbreviation	Stability	Voltage
	2532VXO	270 = 27.000 MHz See Frequency Abbreviations (Pg 2)	A = ± 50 ppm B = ± 30 ppm	2.8 = +2.8 VDC 3.3 = +3.3 VDC



### Frequency Abbreviations

FREQUENCY MHz	CODE
20.000	200
27.000	270
54.000	540

### TEST CIRCUIT

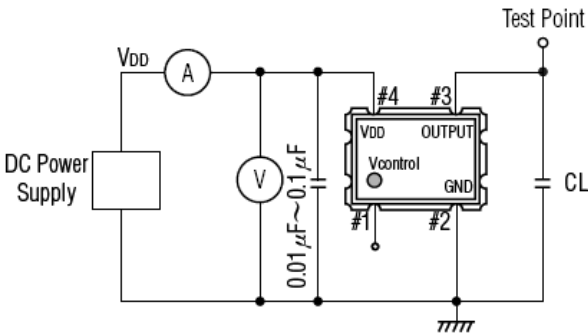


Figure 1) Suggested Reflow Profile

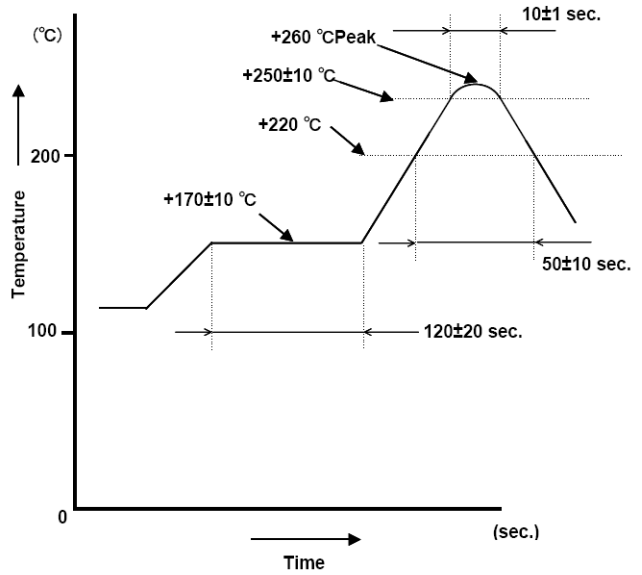
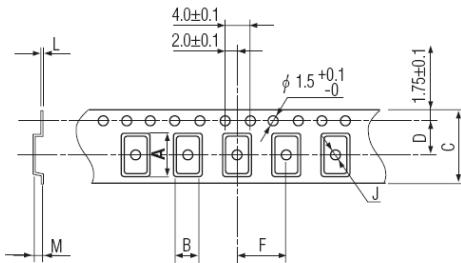


Figure 3) Suggested Reflow Profile

### TAPE DIMENSIONS (mm)



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

Package Data	
Item	Description
Lid	Metal
Base	Ceramic
Sealing	Seam
Terminal	Tungsten (metalized)
Plating	Gold/Nickel (Surface)/(Under)
RoHS	Compliant (Pb Free)

Figure 2) Pocket Tape Dimensions