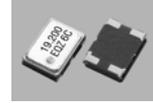


## 3.2 x 2.5 x 0.9mm SMD - Clipped Sinewave 12.6MHz to 40MHz

- Ultra-miniature SMD package 3.2 x 2.5 x 0.9mm
- Stability 0.5ppm over -30° to +85°C
- Supply Voltage from 0.6 Volts to 6.0 Volts
- High stability TCXO, ideal for GPS and similar applications



### DESCRIPTION

XON-3200VHG series TCXOs are ceramic SMD TCXOs packaged in an industry-standard, ultra-miniature 3.2 x 2.5mm package. This TCXO can be run from a supply voltage of 0.6 to 6.0 Volts. Stability is  $\pm 0.5$ ppm over -30° to +85°C.

### SPECIFICATION

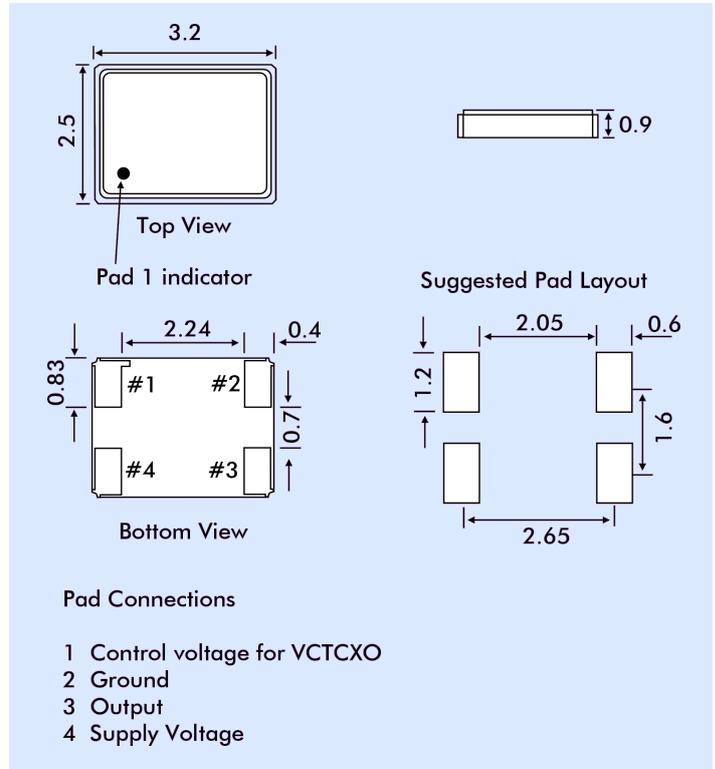
Product Series Code:	XON-3200VHG
Frequency Range:	12.6MHz to 40.0MHz
Output Waveform:	Clipped Sinewave
Initial Calibration Tolerance*:	$\pm 1.5$ ppm at 25°C with $V_{con} = \frac{1}{2} V_{dd} DC$
<b>Frequency Stability</b>	
vs. Temperature Range:	$\pm 0.5$ ppm over -30° to +85°C
vs. Input Voltage Change:	$\pm 0.2$ ppm max. $V_{DD} \pm 5\%$
vs. Output Load Change:	$\pm 0.2$ ppm max. at 10k $\Omega \pm 10\%$ with 10pF $\pm 10\%$
vs. Ageing:	$\pm 1.0$ ppm max./year at 25 $\pm 3$ °C
<b>Absolute Max. Ratings</b>	
Supply Voltage:	-0.6 Volts to +6.0 Volts
Control Voltage ( $V_{con}$ ):	-0.6 Volts to $V_{dd} + 0.5$ Volts
Storage Temperature:	-40°C to +90°C
<b>Operating Conditions</b>	
Operating Temperature:	-30° to +85°C (standard)
Input Voltage ( $V_{dd}$ ):	Option 'F': +2.5 Volts $\pm 5\%$ Option 'H': +2.8 Volts $\pm 5\%$ Option 'J': +3.0 Volts $\pm 5\%$ Option 'K': +3.3 Volts $\pm 5\%$
Control Voltage ( $V_{con}$ ):	$\frac{1}{2} V_{dd} \pm 1VDC$ ( $V_{dd} = +2.5V, +2.8V, +3.0V$ or $+3.3V$ )
Input Current:	2mA max.
<b>Output</b>	
Level:	0.8V p-p min.
Load:	10k $\Omega$ //10pF
Waveform:	Clipped Sinewave (DC Coupled)
<b>Frequency Adjustment</b>	
Voltage Control:	(at $\frac{1}{2} V_{dd} \pm 1V$ ) $\pm 9.0$ to $\pm 15$ ppm
Frequency Slope:	Positive
SSB Phase Noise:	-130dBc/HZ at 1kHz offset
Harmonics:	-5.0dBc max.
Start-up Time:	2ms max.
IR Reflow Resistance:	$\pm 2.5$ ppm max. after 2 x reflows ( $V_{con} = \frac{1}{2} V_{dd} DC$ at $+25 \pm 2$ °C)
Reflow Condition:	$+250 \pm 10$ °C for 10 seconds
Standard Frequencies:	16.38, 16.369, 19.200, 24.5535, 26.000 and 27.456MHz
Optional Operating Temperature:	See table

\* Stability over temperature is measured from this initial frequency.

### PACKAGE/MATERIAL COMPOSITION

Lid:	Metal
Base:	Ceramic
Sealing:	Seam weld
Terminal:	Tungsten (metalized)
Terminal Plating:	Gold (Au) over Nickel (N)
RoHS:	Compliant (Pb-free)

### XON-3200VHG - OUTLINES AND DIMENSIONS



### OPTIONAL TEMPERATURE RANGE

Low Limit/Symbol		High Limit/Symbol	
°C		+°C	
-10°	g	55	ff
-15	h	60	gg
-20	i	65	hh
-25	j	70	ii
-30	k	75	jj
-35	l	80	kk
-10	m	85	ll

### PART NUMBERING PROCEDURE

Example: **XON-3200-VHG - xx**  
Where 'xx' refers to the above temperature/stability table.