


**OX-501**
**Features**

- 6-Pin SMD package
- Fast warm-up
- Frequency Range, 10 MHz to 40 MHz
- Standard freq: 10, 12.8, 16.384, 19.2, 20, 24.576, 25, 26, MHz,

**Applications**

- Base stations
- Test equipment
- Femto base station
- Military communication equipment

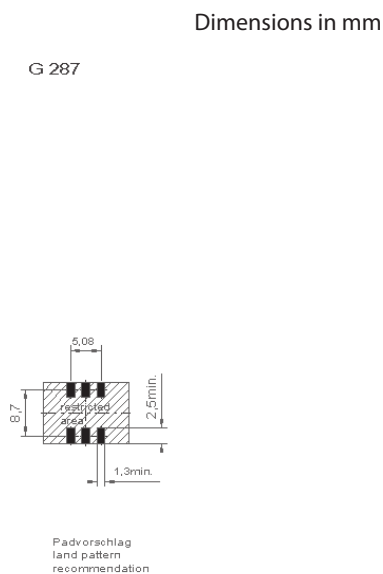
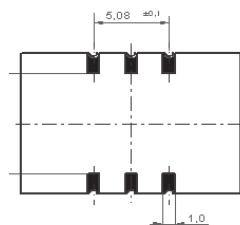
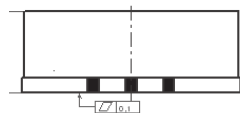
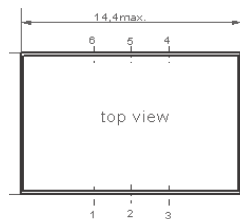
**Performance Specifications**

Frequency Stabilities <sup>1</sup> 10 to 40 MHz						
Parameter	Min	Typical	Max	Units	Condition	Options <sup>5</sup>
vs. operating temperature range (referenced to +25°C)	-20 -20		+20 +20	ppb ppb	-20 to +70°C -40 to +85°C	
slope	-2		+2	ppb/°C	@ Temp stab. +-10ppb	
Initial tolerance	-0.5		+0.5	ppm	at time of shipment, nominal EFC	
vs. supply voltage change	-20		+20	ppb	V <sub>s</sub> ±5% static	
vs. load change	-30		+30	ppb	Load ±5% static	
vs. aging / day	-5		+5	ppb	after 30 days of operation	
vs. aging / year	500		+500	ppb	after 30 days of operation	
vs. aging / 10 years					after 30 days of operation	
Holdover						
Start up time						
Warm-up time			3	minutes	to ±200ppb of final frequency (1 hour reading) @ +25°C	

# Performance Specifications

Supply Voltage (Vs)						
Parameter	Min	Typical	Max	Units	Condition	
Supply voltage (standard)	3.135	3.3	3.465	VDC		
Power consumption		1.4	2.0	Watts	during warm-up	
		0.5	0.66	Watts	steady state @ +25°C	
RF Output						
Signal [standard]	HCMOS					
Load		15		pF		
Signal Level (Vol)			0.4	VDC	with Vs=3.3V and 15pF Load	
Signal Level (Voh)	2.4			VDC	with Vs=3.3V and 15pF Load	
Duty Cycle	45		55	%	@ (Voh-Vol)/2	
Frequency Tuning (EFC)						
Tuning Range	Fixed OCXO; No adjust				Opti- on <sup>5</sup>	
Tuning Range	±5		±12			
Linearity	10%					
Tuning Slope	Positive					
Control Voltage Range	0.0	1.4	2.8	VDC	with Vs=3.3V	
Additional Parameters						
Phase Noise <sup>3</sup>		-60	-45	dBc/Hz	1 Hz	@ 20MHz
		-100	-95	dBc/Hz	10 Hz	
		-128	-120	dBc/Hz	100 Hz	
		-140	-135	dBc/Hz	1 kHz	
		-148	-145	dBc/Hz	10 kHz	
Weight			8.0	g		
Processing & Packing	Handling & Processing Note					
Absolute Maximum Ratings						
Supply voltage (Vs)			4.0	V	with Vs=3.3 VDC	
Output Load			50	pF		
Operable Temperature Range	-40		+85	°C		
Storage Temperature Range	-40		+85	°C		

# Outline Drawing / Enclosure

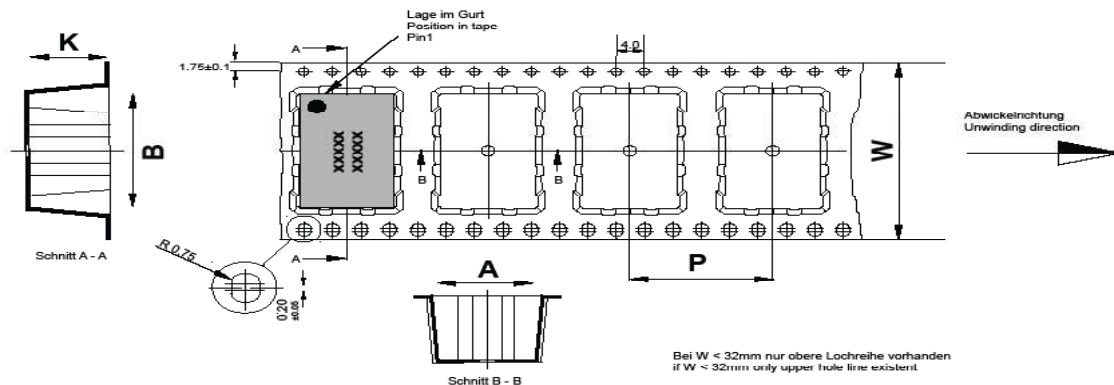


OX-501	
Height "H"	cover material
6.2	plastic

Pin Connections	
1	I.C (Do not connect) / EFC (option)
2	N.C
3	Ground (Case)
4	RF Output
5	N.C / Enable (option)
6	Supply Voltage Input

Enable true table	
pin 5	pin 4
high	data
open	data
low	high tristate

## Standard Shipping Method (OX-501)



<b>Maßangaben in mm:</b> A, B und K Maße von Bauelement abhängig Fertigungstoleranzen entsprechen der DIN IEC 286-3	<b>Dimension in mm:</b> A, B und K are dependent upon component dimensions production tolerance complying DIN IEC 286-3
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All dimensions in millimeters unless otherwise stated

Enclosure Type	Tape Width W (mm)	Quantity per meter	Quantity per reel	Dimension P
OX-5011 (6.2 mm)	24	83.5	850	12

## Reflow Profile

IPC/JEDEC J-STD-020 (latest revision)

Additional Information:

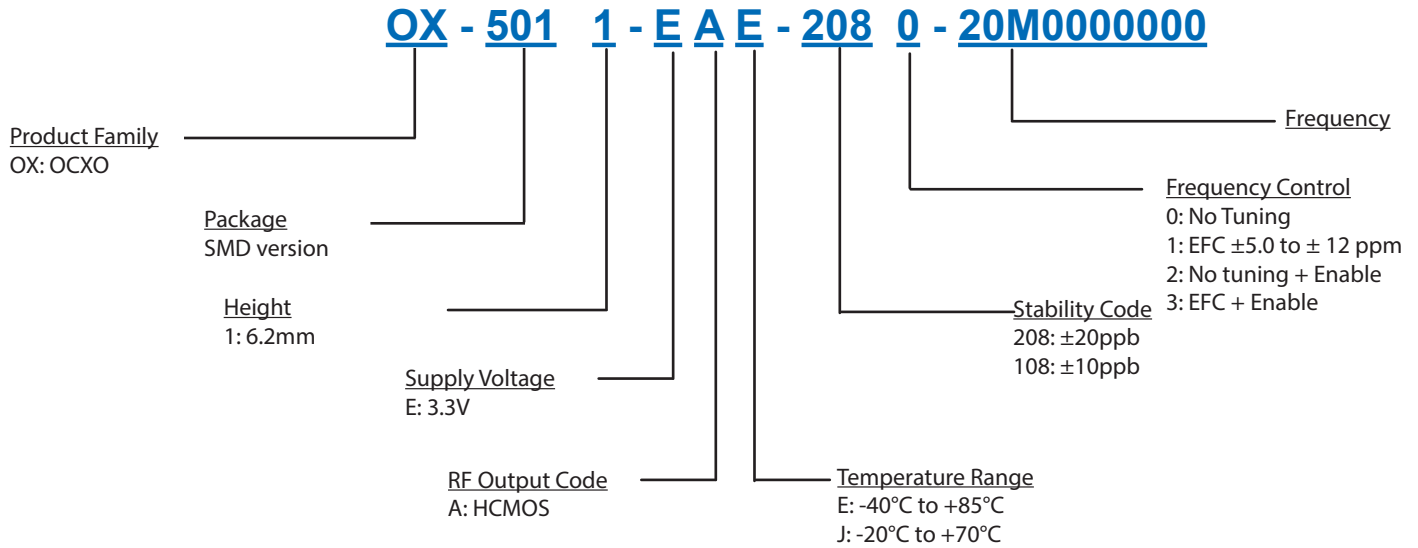
This SMD oscillator has been designed for pick and place reflow soldering.

SMD oscillators must be on the top side of the PCB during the reflow process.

## Additional Environmental Conditions

Parameter	Description
Rapid temperature changes	MIL-883-1010 Cond B 500 cycles -55/125C
Vibration	MIL-STD-883 Meth 2007 Cond A 20G 20-2000Hz 4x in each 3axis 4 min
Shock	JESD22-B104-B 200G 1,5ms 6 shocks in each direction
Solderability	J_STD_002C Cond A, Through hole device/ Cond. B, SMD 255C (diving time 50,5sec.) Dip+Look with 8h damp pre-treatment: solder wetting >95%
Solvent resistance	MIL-STD-883 Meth 2015 Solv. 1,3,4
ESD	HBM JESD22-A114-E Class 2 10* 2000V
Moisture Sensit.	Level 1 JESD22-A113-B
RoHS compliance	100% RoHS 6 compliant
Washable	non-washable device

## Ordering Information



**Notes:**

1. Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
2. Unless other stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C).
3. Phase noise degrades with increasing output frequency.
4. Subject to technical modification.
5. Contact factory for availability.

## For Additional Information, Please Contact

**USA:**

Vectron International  
267 Lowell Road Suite 102  
Hudson, NH 03051  
Tel: 1.888.328.7661  
Fax: 1.888.329.8328

**Europe:**

Vectron International  
Landstrasse, D-74924  
Neckarbischofsheim, Germany  
Tel: +49 (0) 7268.801.100  
Fax: +49 (0) 7268.801.282

**Asia:**

Vectron International  
68 Yin Cheng Road(C), 22nd Floor  
One LuJiaZui  
Pudong, Shanghai 200120, China  
Tel: +86 21 6194 6886  
Fax: +86 21 6194 6699

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