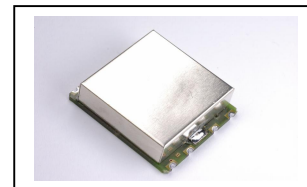


## Typical Applications

Base Stations

## Features

Surface Mount Package  
 Reflow Process Compatible  
 Low Phase Noise  
 Build in PLL-Circuit



## Previous Vectron Model Numbers

FCXO100

## Output Frequency range

10 MHz – 200 MHz

## Standard frequencies

52; 61.44MHz

## Reference Frequency

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code <sup>5</sup>
Input frequency Pin 2	1		160	MHz	± 2 ppm	
Standard input frequencies		10 13 26 32,768		MHz MHz MHz MHz		X106 X136 X266 X326
Parameter	Min	Typ	Max.	Units	Condition	
Reference Level	0.5		1	V <sub>pp</sub>	@ 2 kΩ	
Reference Input Impedance	2			kΩ		
Harmonics			-30	dBc		

## Output Frequency

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code <sup>5</sup>
output frequency Pin 4	10		200	MHz		
Standard output frequencies		52 61.44		MHz		X526 X616

## Supply voltage (Vs)

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code <sup>5</sup>
Supply voltage [Standard]	3.135	3.3	3.465	VDC		SV033
Current consumption			50	mA	steady state @ +25°C & 3.3VDC	

## RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code <sup>5</sup>
Signal [Standard]		HCMOS				RFH
Load		15		pF	with Vs=3.3V and 15pF load with Vs=3.3V and 15pF load  @ (Voh-Vol)/2	
Signal Level (Vol)			0.3	VDC		
Signal Level (Voh)	3.0			VDC		
Rise and Fall time			5	ns		
Duty cycle	40		60	%		

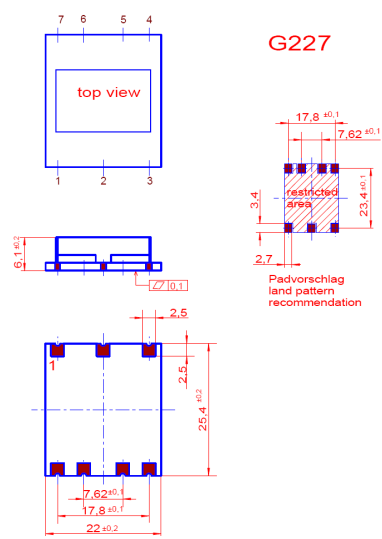
## Additional parameters

Parameter	Min	Typ	Max.	Units	Condition	
Phase Noise <sup>3</sup>		-80 -110 -135 -150 -155		dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz	10 Hz 100 Hz 1 Hz 10 kHz 100 kHz	@ 61.44 MHz

## Additional parameters

Parameter	Min	Typ	Max.	Units	Condition
VCXO Control PIN 7	0.5		2.5	V	
Weight			9	g	
Processing & Packing	Handling & processing note				
Operating temperature range	-20		+70	°C	
Operable temperature range	-30		+85	°C	
Storage temperature range	-55		+125	°C	

## Enclosures

Type G227		
Package Codes:		
Code NA	Height "H" NA	Pin Length "L" NA
 <p style="text-align: center;"><b>G227</b></p>		
Pin Connections	Description	
1 Vs	Power supply pin. External low frequency bypass capacitor should be connected	
2 Ref. Frequency in	High stabel input frequency for synchronisation, This input is AC coupled, so an external blocking capacitor is not necessary.	
3 GND	Ground connection. Keep traces physically short and connect immediately to ground plane for best performance	
4 RF-OUT	RF synchronised output.	
5 GND	Ground connection. Keep traces physically short and connect immediately to ground plane for best performance	
6 Lock Detector Output	<b>Test output</b> signal for PLL lock detected. Low signal $\hat{a}$ PLL out of lock High signal $\hat{a}$ PLL in lock Only for modul test or observance	
7 VCXO Control	<b>Test output</b> of the control voltage for the VCXO (0.5V to 2.8V) Only for modul test or observance	
Marking		
C3530A1-xxxx Frequency * VI AYYWW		

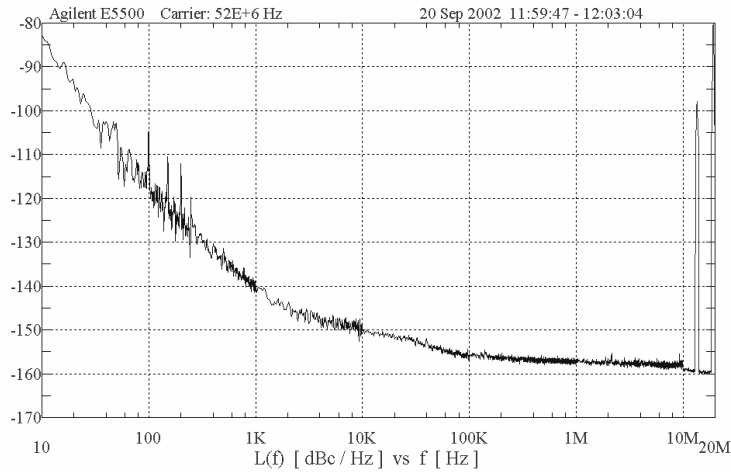
## Absolute Maximum Ratings

Parameter	Min	Typ	Max.	Units	Condition
Supply voltage (Vs)			6.0	V	
Maximum output load @ CMOS			40	pF	

## Typical measurement data

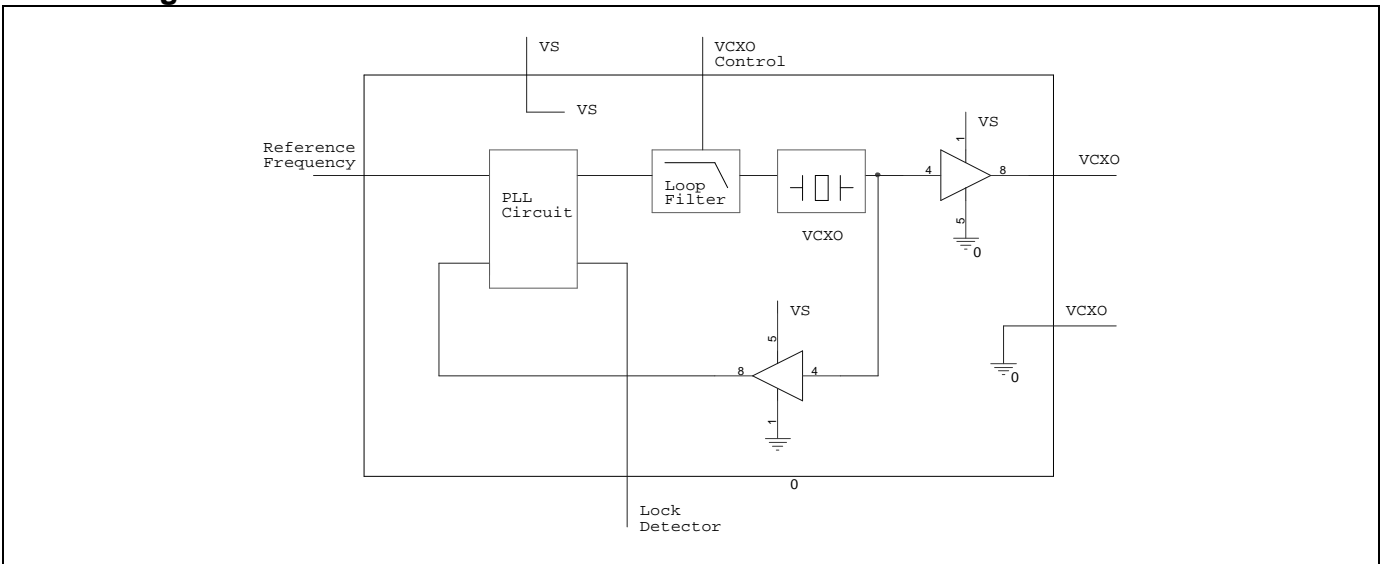
### Phase Noise and Jitter

C3530A1 with 32.768MHz in & 52MHz out  
FCXO fm=32,768 MHz; fout=52 MHz

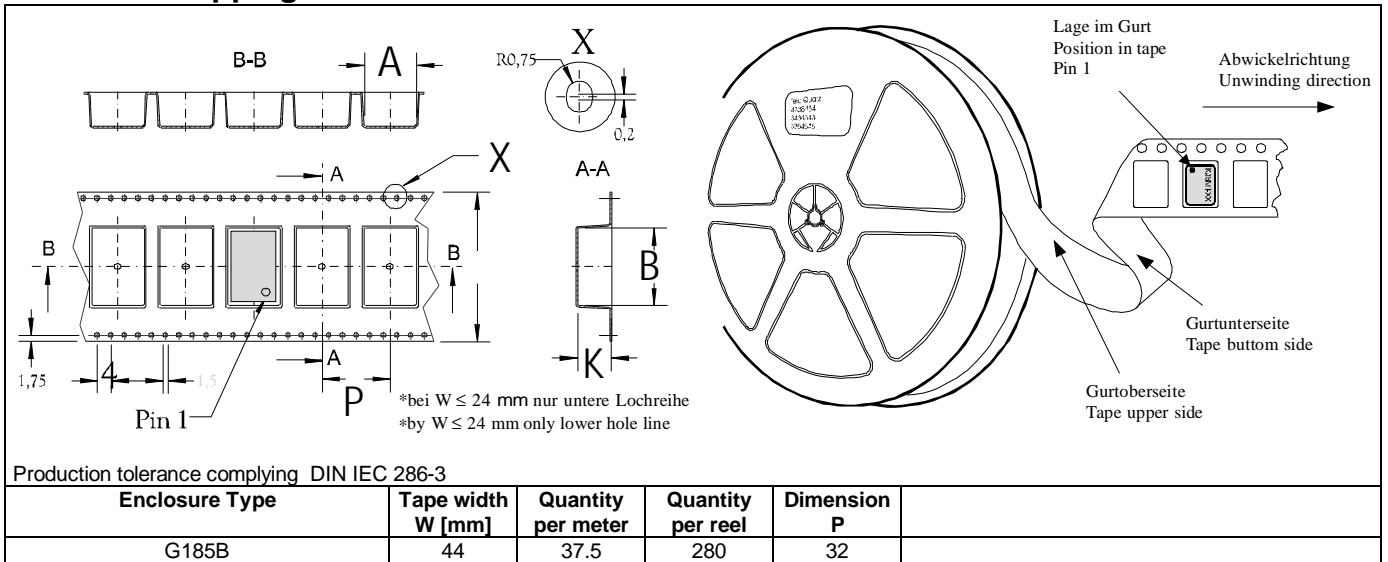


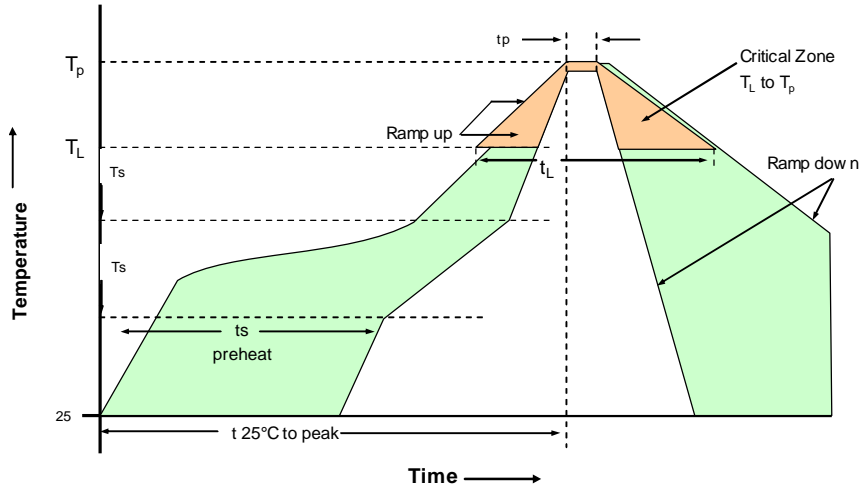
Frequency range [Hz]	S $\phi$ (f) [dB]	Jitter [ps rms]
100 Hz to 1.5 MHz	-61,86	1.616 ps
50 kHz to 1.5MHz	-62,07	1.578 ps

## Block Diagramm



## Standard Shipping Method





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

Profile Feature	Pb-Free Assembly/Sn-Pb Assembly
Average ramp-up rate ( $T_L$ to $T_p$ )	3°C/second max.
Preheat -Temperature Min $T_{s_{min}}$ -Temperature Min $T_{s_{max}}$ -Time (min to max) ( $t_s$ )	150°C 200°C 60-180 seconds
$T_{s_{max}}$ to $T_L$ - Ramp-up Rate	3°C/second max.
Time maintained above - Temperature ( $T_L$ ) - Time ( $t_L$ )	217°C 60-150 seconds
Peak Temperature ( $T_p$ )	max 260°C
Time within 5°C of actual Peak Temperature ( $t_p$ )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Note: All temperatures refer to topside of the package, measured on the package body surface.

## How to Order this Product:

Step 1	Use this worksheet to forward the following information to your factory representative:					
	Model	Ref. Freq	Freq out	Supply Voltage Code	RF Output Code	Package Code
	C3530					

Example: C3530                      X326              X526                      SV033                      RFC                      A1

Step 2	The factory representative will then respond with a Vectron Model Number in the following Configuration:			
	Model	Package Code	Dash	Dash Number
	C3530	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]

Typical P/N = C3530A1-0001

### Notes:

- 1 Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
- 2 Unless otherwise 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.