

# 14.0 mm x 9.0 mm VCXO

# V1A series

### Description:

The V1A Voltage Controlled Crystal Oscillator (VCXO) Series products provide superior phase noise performance available in a wide range of operating frequencies.



### Features:

- Available in frequencies from 50.0MHz to 125 MHz.
- 9mm x 14mm SMD FR4 package
- HCMOS output
- RoHS/Leadfree compliant

### Frequency Range

Frequency
50 to 125 MHz

### Operating Temperature

Operating Temperature	Product Code
0 to 70C	<b>2</b>
-20 to 70C	<b>3</b>
-40 to 85C	<b>5</b>

### Frequency Stability

Freq. Stability	Product Code
±25ppm	<b>A</b>
±50ppm	<b>B</b>

### Aging: (typical at 100MHz after 30 days continuous operation)

Timeframe	Aging
First Year	± 3.0 ppm
Per Year (after 1 <sup>st</sup> Year)	±1.0ppm

### Supply Voltage (Vs):

Power Supply (Vs)	3.3 Vdc ±10%
<b>Product Code</b>	<b>C</b>

(Other Options Available – Consult Factory)

### Current Consumption ( I<sub>DD</sub> ):

I <sub>DD</sub> ( at 3.3V )
CMOS
15mA typ.
25mA max.

### Electronic Frequency Control:

	Pullability	Control Voltage	Linearity	Slope	Input Modulation Bandwidth	Input Impedance
<b>Product Code A</b>	±20ppm ARP Min **	1.65V±1.65V	10% max	Positive	10KHz min @ - 3dB	50KΩ min

\*\* Inclusive of tolerance @25°C, stability over temperature, voltage change, load change, and aging)

### Environmental:

Rohs Compliant	Compliant
Storage Temperature	-45°C to +90°C
Thermal Shock	MIL-STD-883, Method 1011, Conditon A
Moisture Resistance	MIL-STD-883, Method 1004
Solvent Resistance	MIL-STD-202, Method 215
Resistance to solder heat	MIL-STD-202, Method 210, Condition I or J
Solderability	MIL-STD-883, Method 2003

### Output Waveform:

HCMOS, 15pF Load (Option 3)		Min	Typical	Max
Output Symmetry (%)	At 50% V <sub>DD</sub>	45	50	55
Output Logic "1"	V <sub>OH</sub>	90% V <sub>DD</sub>		
Output Logic "0"	V <sub>OL</sub>			10% V <sub>DD</sub>
Rise/Fall Time ( nS )	20%-80% V <sub>DD</sub>			3

### Phase Noise (Typ) @ 100MHz;

Frequency Offset	Option A
10Hz	-86 dBc/Hz
100Hz	-118dBc/Hz
1KHz	-143dBc/Hz
10KHz	-157dBc/Hz
100KHz	-164dBc/Hz
1MHz	-167dBc/Hz

### Phase Analysis:

Phase Jitter	12KHz-80MHz	0.12pS typ. @100MHz
Phase Noise Floor	@100MHz	-165dBc/Hz typ.
Sub-Harmonics		None

### Ordering Options:

Model Number	Phase Noise	Operating Temperature	Frequency vs. Temp stability	Supply Voltage	Output waveform	EFC	Frequency
V1A	A	2	A	C	3	A	xxxMx
		3	B				
		5					

### Part Number Format V1A-LNL-LNL-50M

