NVG79D & E Series
Low Power DIP OCXO

Description:

Bliley's low power DIP OCXOs are designed for portable applications where low start-up and idling current are required to preserve battery life.

The Bliley Low Power DIP OCXO contains an internal hermetically sealed crystal for improved reliability and manufacturability.

This series of OCXOs has fast warm-up times, are available with various input supply voltages and have excellent frequency vs. temperature performance.

Features:

- **Low Input current during warm-up <250mA**
- **Warm-up Time as low as <10 Seconds**
- **Power Input at steady state <0.4 watts**
- **Standard Frequencies available; 10MHz, 12.8MHz, 16MHz, 16.384MHz, 19.44MHz, 20MHz, 26MHz, and 40MHz**
- **Many other Frequencies available, consult factory for your specific requirements.**

Frequency Range:

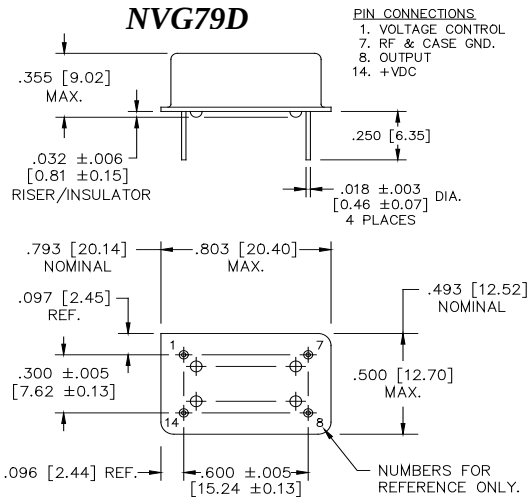
Output Frequency Range	20 KHz to 54MHz

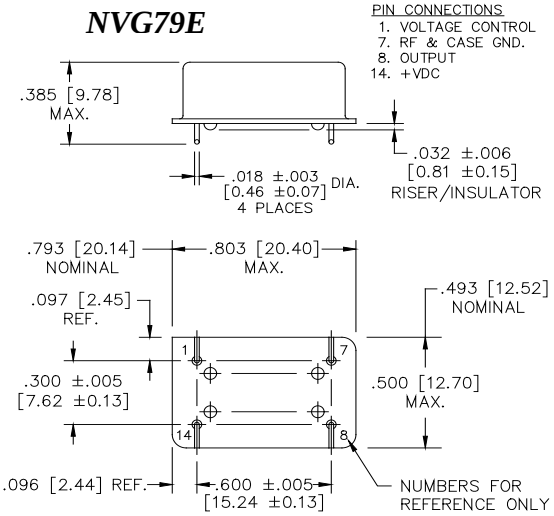
Frequency versus Temperature:

Operating Temperature	Temperature Range Options	Frequency Stability (Block Tolerance)
0°C to 60°C	Option A	0.05ppm
-20°C to+70°C	Option B	0.10ppm
-40 to +85 °C	Option C	0.20ppm

Typical Specifications:

Parameter	Specification			Units
Supply Voltage	+3.3VDC & +5VDC			
Output Signal	**Option A - Sine Wave**			
Frequency <20MHz	>0.8			Vpp
Frequency >20MHz	>0.63			Vpp
Output Load	50			Ω
Supply Voltage	3.3	5	12	VDC
Output Signal	**Option B - HCMOS Compatible**			
Level "0"	<0.4			V
Level "1"	>Vcc – 0.5V		4.5 – 5.0	V
Rise & Fall Time	<7			nS
Duty Cycle	50±5			%
Output Load	1KΩ || 5pF			





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Typical Specifications …continued

Parameter		Units
Aging		
1st Year	±0.3	ppm
10 Years	±2.5	ppm
Short Term Stability		
0.1 Sec to 30 Sec	$<5 \times 10^{-10}$	
Typical @ 1 Sec	5×10^{-11}	

Parameter		Units
Freq Stability vs. Supply Voltage; 5% Change	±0.1 Max ±0.04 Typical	ppm
Frequency Stability vs. Load Change; 10% Change	±0.01 Max ±0.006 Typical	ppm

Phase Noise Performance:

Typical @ 10MHz	HCMOS Output	Sine Wave Output	Units
Offset from Carrier			
1 Hz	-70	-75	dBc/Hz
10Hz	-100	-110	dBc/Hz
100Hz	-130	-135	dBc/Hz
1KHz	-140	-145	dBc/Hz
10KHz	-145	-150	dBc/Hz

Electronic Frequency Control:

Voltage Control Range	Supply Voltage +3.3VDC	Supply Voltage +5.0VDC	Supply Voltage +12VDC	Units
0.0 – 3.3 VDC	>±2.5	----	----	ppm
0.5 – 5.0 VDC	----	>±2.5	>±2.5	ppm

Power Supply Characteristics:

	Option "A"	Option "B"	Option "C"	Units
Input Voltage	+3.3	+5	+12	VDC
Input Current @ 30°C	<110	<80	<30	mA
Input Current @-20°C	<170	<120	<45	mA
Turn-on Current	<250	<250	<250	mA
Warm-up Time	30	10	10	Seconds

Ordering Options:

	Package Style	Temperature Range	Output Type	Power Supply	Operating Frequency (MHz)
NVG79 (ROHS Compliant)	D	A	A	A	XXMXXX
	E	B	B	B	XXMXXX
		C		C	XXMXXX

NVG79 D B A B 16M384