

VNL4-Series Specifications



20.20L x 12.52W x 7.80H (mm)
0.795L x 0.493W x 0.307H (in)

PDI VNL4-Series Oven Controlled Crystal Oscillators (OCXO) ensures precise frequency under the most demanding circumstances. With low power consumption, performance in high vibration environments, and double-hermetically sealed quartz crystal, this OCXO can also be made available in custom frequencies. PDI provides fast sampling for your proto-typing needs, mass production capability, and competitive pricing.

ex) **VNL4-10000X-H-T-B-5-X-X***

FREQUENCY

10000X – 50000X =
 10.000MHz – 50.000MHz

OUTPUT

H = HCMOS
O = LVCMOS

FREQUENCY STABILITY

E = ±25 ppb
R = ±50 ppb
F = ±75 ppb
T = ±100 ppb
H = ±200 ppb
K = ±250 ppb
S = Special

OPERATING TEMPERATURE

A = 0 to +60°C
B = -20 to +70°C
D = -40 to +85°C
S = Special

SUPPLY VOLTAGE

3 = 3.3
5 = 5.0
12 = 12.0

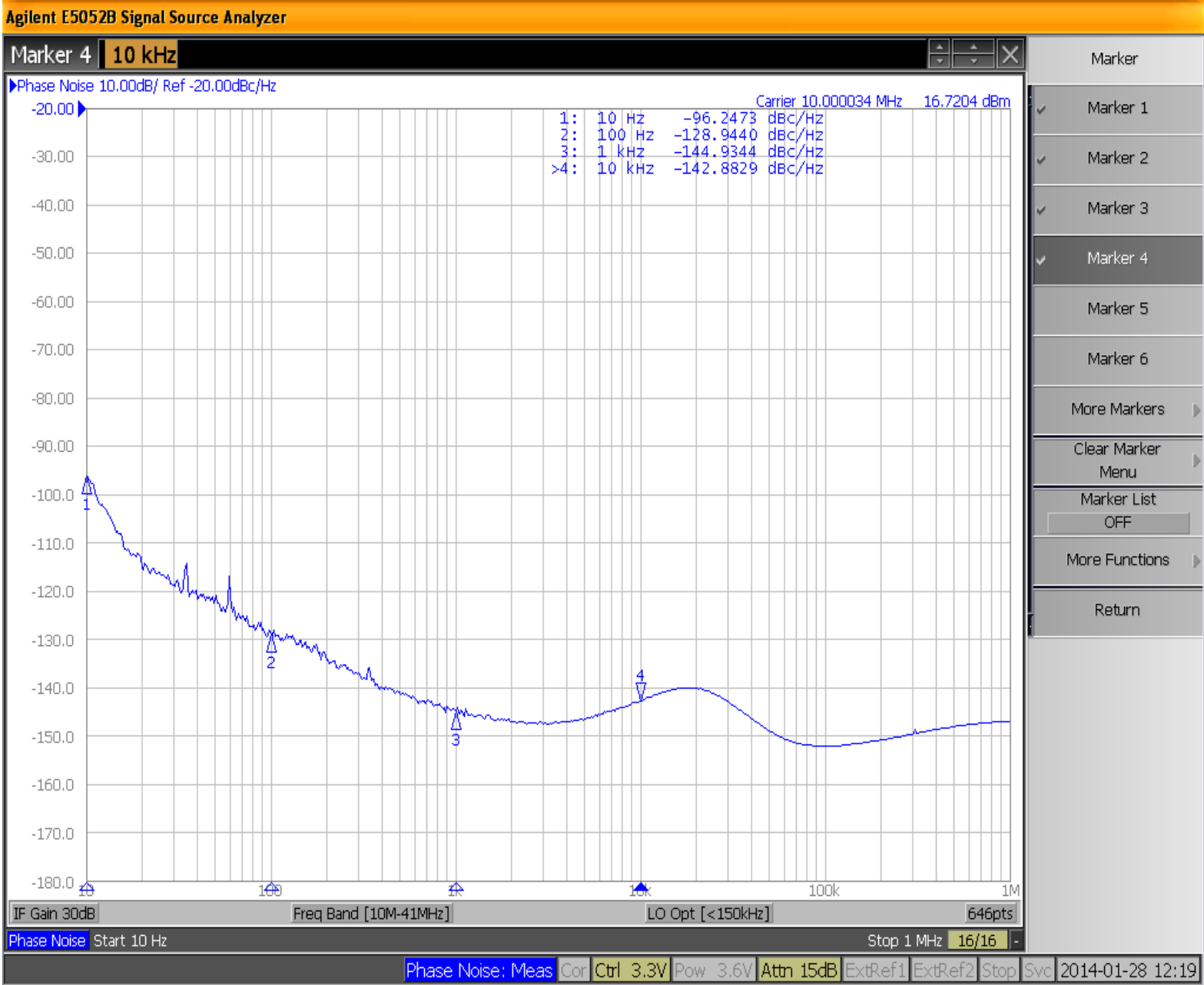
PACKAGE

X = Thru Hole
G = Gull Wing

* - for standard or assigned for customization.

Parameter	Supply Voltage (±5%)			Units	
	3.3	5.0	12.0	V	
Frequency Range	10.000000 to 50.000000			MHz	
Frequency Stability (Without Air Flow)	vs Temperature (0°C to +60°C)	±50 Maximum	±25 Maximum		
	vs Temperature (-20°C to +70°C)	±75 Maximum	±50 Maximum		
	vs Temperature (-40°C to +85°C)	±100 Maximum			
	vs Temperature (-55°C to +85°C)	±200 Maximum			
	vs Supply Voltage	±100			
	vs Load (Max. for a 5% change)	±10			
	vs Aging (Max. per year)	±300			
Warm-Up (@ +25°C) (Max.)	±100 30 sec. after switch on	±100 20 sec. after switch on	±100 15 sec. after switch on		
Temperature Range	Per Option			°C	
	-55°C to +125°C				
Frequency Adjustment	Frequency Tuning (Min.)	±2.5		ppm	
	Voltage Control Range	0.0 to 3.3	0.5 to 5.0		
	Slope	Positive			
Input Current	@ +25°C	80	50	25	mA
	@ -20°C	120	80	40	
Start-Up Current	@ +25°C	≤250 (10 seconds max)			mA
Output	LVC MOS	HCMOS			
Duty Cycle	@ 50% Vcc	40/60			%
Load		3.0 Minimum , 47 Maximum			pF
Rise/Fall Times	No Load	7.0 Maximum			nS
Output Voltage Levels	High (Minimum)	Vcc-0.5			V
	Low (Maximum)	0.4			V
Start-Up Time		5.0 Maximum			mS
Phase Noise (Typical) (10MHz @ +5Vdc)	@ 10 Hz	-96		-90	dBc/Hz
	@ 100 Hz	-128		-120	
	@ 1 KHz	-144		-130	
	@ 10 KHz	-142		-135	
	@ 100 KHz	-152		-138	

PHASE NOISE PLOT



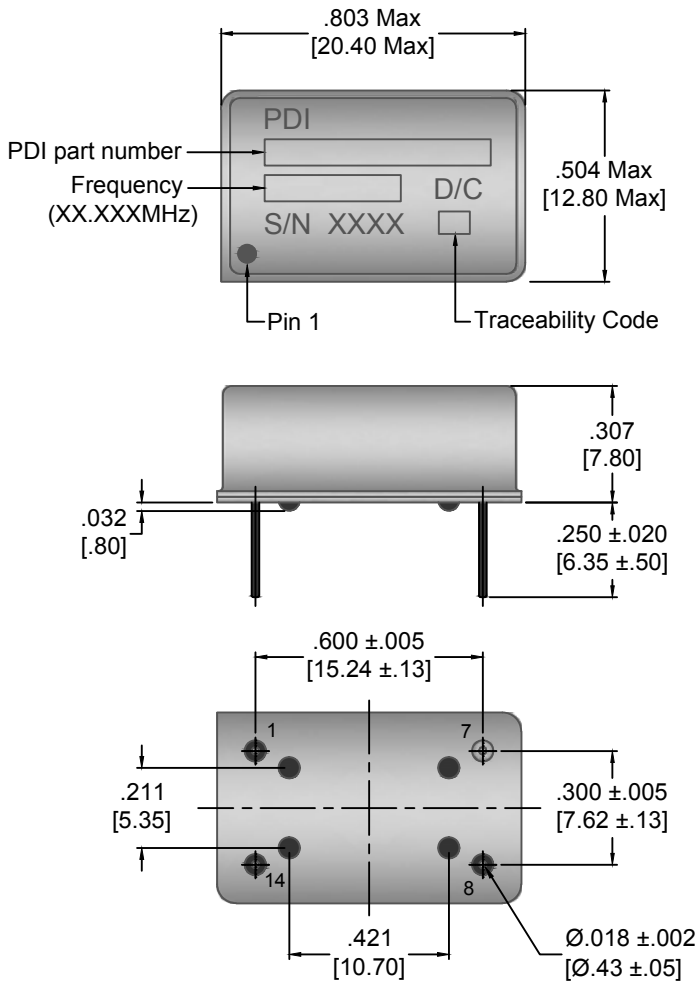
VNL4-Series 20.40 x 12.80 x 7.80 (mm)

PACKAGE DIMENSIONS

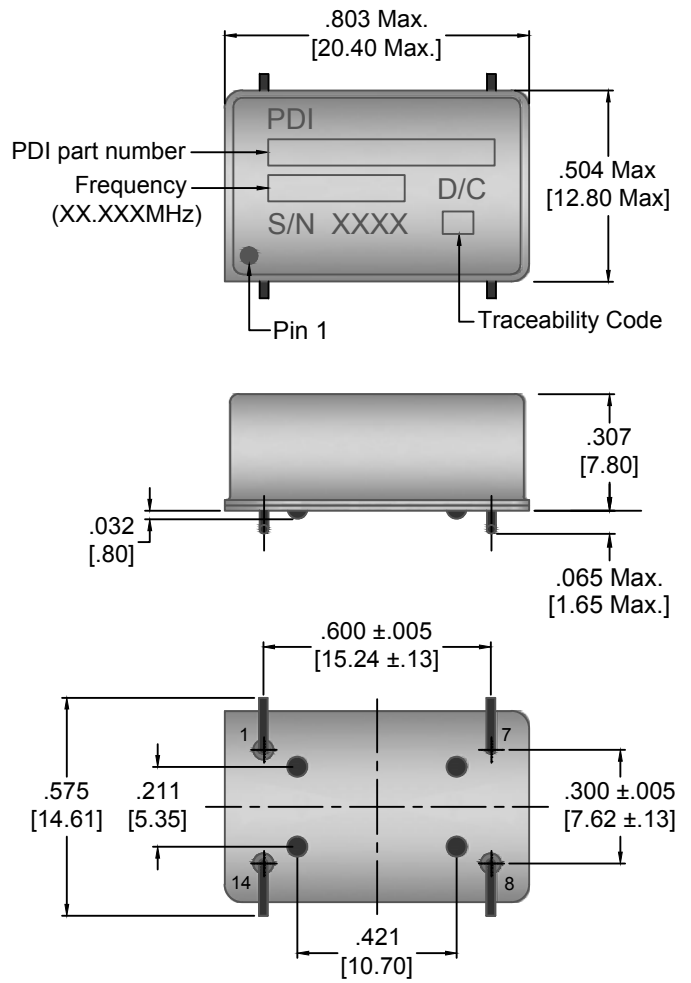
Decimal XXX = ± .008, XX = ± .02 Metric [XXX = ± .20], [XX = ± .50]

PIN	CONNECTION
1	Voltage Control
7	Ground/Case
8	Output
14	Supply Voltage

Thru Hole Option



Gull Wing Option



NOTES:

All product supplied in anti-static packaging.
 All product is supplied *RoHS* and *REACH* compliant.
 All tests are performed in Still Air test conditions, unless otherwise stated.
 Specifications subject to change without notice, last updated 4/1/13.