

3.3V Surface Mount Crystal Oscillator VPLC54TE



VCXO

2111 Comprehensive Drive
Aurora, Illinois 60505
Phone: 630-851-4722
Fax: 630-851-5040
www.conwin.com

The Connor-Winfield VPLC54TE is a 3.3V voltage controlled crystal oscillator (VCXO) designed for use in phase locked loops of SONET / SDH systems. Using no PLL multiplication schemes, the VPLC54TE provides one pair of stable, low jitter, LVPECL differential outputs.

Features:

3.3V Operation

Low Jitter <1ps RMS

Overall Stability ± 20 ppm

Low Profile, Surface Mount Package

Output Disable Feature

Specifications		VPLC54TE
Center Frequency (Fo)		622.08 MHz, 644.53125 MHz, 666.51428 MHz, 669.3266 MHz, 672.163 MHz, and 672.1627 MHz
Frequency Stability (Vcontrol = 1.65Vdc)		± 20 ppm Includes frequency changes due to calibration, temperature, supply voltage variations, and 10 yr aging
Temperature Range		0°C to +70°C
Supply Voltage (Vcc)		3.3Vdc $\pm 5\%$
Supply Current		100 mA Maximum
Output	Waveform	Low Voltage PECL Squarewave
	Load	50 Ohms Terminated into Vcc-2V or Thevenin Equivalent
	Voltage Voh	2.275V Minimum
	Vol	1.68V Maximum
	Duty Cycle	45 / 55 Maximum Measured at 50%
	Jitter	1.0ps RMS Maximum over 12 kHz to 80 MHz Bandwidth
	SSB Phase Noise (Typical)	-60dBc / Hz @ 100 Hz, -130dBc / Hz @ 10 kHz
Frequency Control	Control Voltage	0.3Vdc to 3.0Vdc
	Pullability (measured @ 25°C, referenced to Fo)	Sufficient to meet Absolute Pull Range below
	Absolute Pull Range	± 25 ppm Minimum
	Control Voltage for Fo	1.65Vdc Typical
	Slope	Positive
	Monotonic Linearity	< $\pm 10\%$
	Input Impedance	50k Ohm
Enable / Disable (Pin 16)		Enable; Low Level (Vil), Disable; High Level (Vih) Note: When oscillator is disabled, the output Q is in a low state (Vol), Output \bar{Q} is in a high state (Voh). Internal 75K ohm pull-down resistor
Package		Non-Hermetic package with FR4 substrate and grounded metal cover

Ordering Information

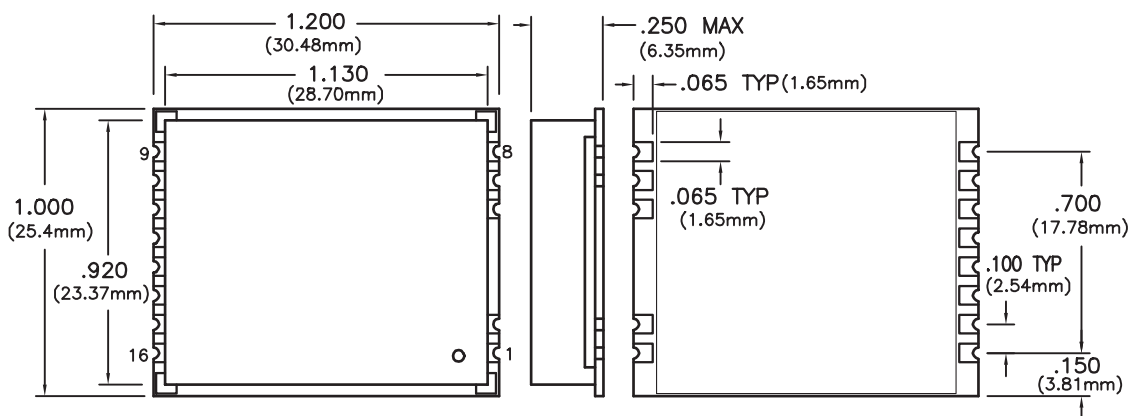
VPLC54TE - 622.08MHz

VCXO
SERIES

CENTER
FREQUENCY

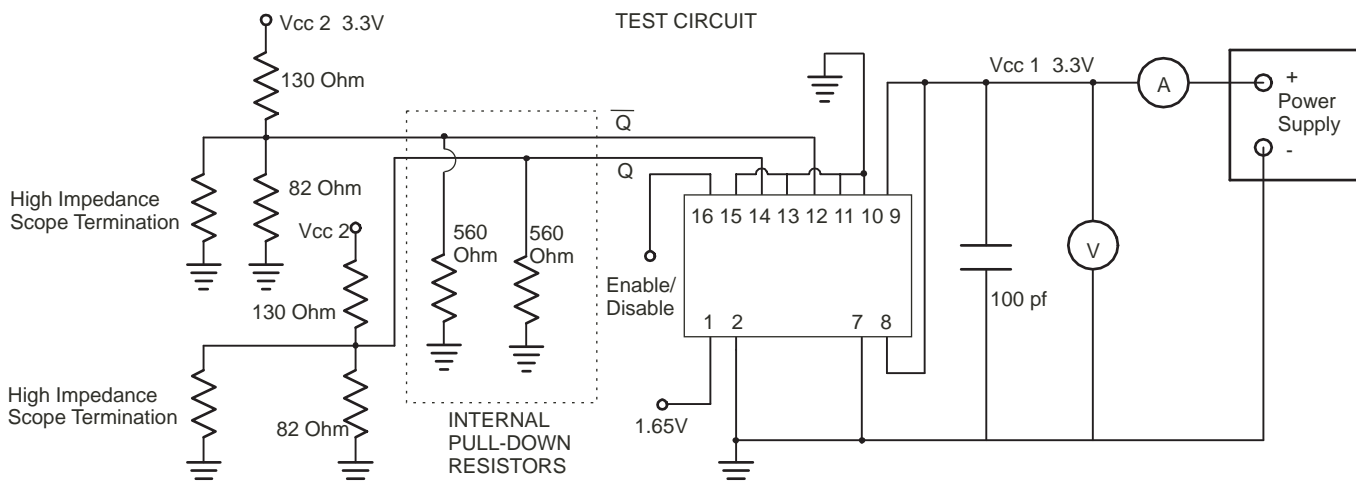
US Headquarters:
630-851-4722
European Headquarters:
+353-61-472221

Bulletin **Vx316**
Page **1 of 2**
Revision **09**
Date **06 March 2002**

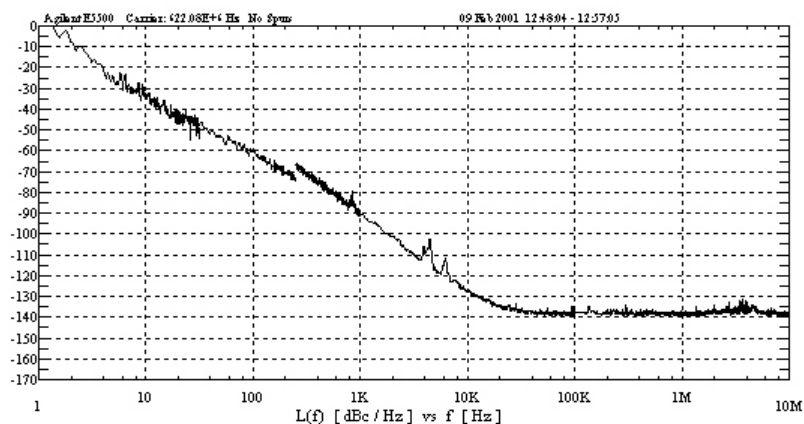


Pin Connections

- 1: Control Voltage
- 2: Ground
- 6: N/C
- 7: Ground
- 8: Supply Voltage
- 9: Supply Voltage
- 10: Ground
- 11: Ground
- 12: Comp Output \bar{Q}
- 13: Ground
- 14: Output Q
- 15: Ground
- 16: Enable / Disable



TYPICAL SSB PHASE NOISE



SUGGESTED PAD LAYOUT

