

THE CONNOR-WINFIELD CORP.

2111 COMPREHENSIVE DRIVE. AURORA, IL 60505. FAX (630) 851-5040. PHONE (630) 851-4722. WWW.CONWIN.COM



PRODUCT DATA SHEET



PIN 5.0V HCMOS VCXO HIGH FREQUENCY

ABSOLUTE MAXIMUM RATINGS						TABLE 1.0
PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	
Control Voltage	(Vc)	-0.5	-	7	Vdc	
MODEL SPECIFICATIONS						

MODEL NUMBER						TABLE 2.0
HV51-xxxG	Frequency Stability:	-25	-	25	ppm	1
HV52-xxxG	Frequency Stability:	-50	-	50	ppm	1
HV53-xxxG	Frequency Stability:	-100	-	100	ppm	1
HV54-xxxG	Frequency Stability:	-20	-	20	ppm	1
HV55-xxxG	Frequency Stability:	-10	-	10	ppm	1
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HV55-XXXG	Frequency Stability:		-10	-	10	ppm	1
Pullability Codes (xxx - Add code to the end of the Model Number) TABLE 3.							TABLE 3.0
050	Frequency Pullability:		±25	-	-	ppm	2
100	Frequency Pullability:		±50	-	-	ppm	2
150	Frequency Pullability:		±75	-	-	ppm	2
160	Frequency Pullability:		±80	-	-	ppm	2
200	Frequency Pullability:		±100	-	-	ppm	2, 3
240	Frequency Pullability:		±120	-	-	ppm	2, 3
300	Frequency Pullability:		±150	-	-	ppm	2, 4
ODEDATIN	IC CDECIFICATIONS						

OPERATING SPECIFICATIONS						TABLE 4.0
PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	30	-	100	MHz	
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.0	5.25	Vdc	
Supply Current ≤ 50 MHz	(lcc)	-	-	35	mA	
Supply Current > 50 MHz	(lcc)	-	-	60	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 100Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-125	-	dBc/Hz	
SSR Phase Noise at 100KHz offset		_	-135	_	dBc/Hz	

SSB Phase Noise at 100KHz offset		-	-135	-	dBc/Hz	
INPUT CHARACTERISTICS						TABLE 5.0
PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage Range	(Vc)	0.5	2.5	4.5	Vdc	
Center Frequency		2.0	2.5	3.0	Vdc	
Monotonic Linearity		-15	-	15	%	
Input Impedance		-	50K	-	Ohm	
Modulation Bandwidth (3dB)		15	-	-	KHz	
HCMOS OUTPUT CHARACTERISTICS TABLE				TABLE 6.0		

HCWIOS OUTFUT CHARACTERISTICS						I ADLE 0.0	
PARAMETER			MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD			-	-	15	pF	
Voltage	(High)	(Voh)	4.5	-	-	Vdc	
	(Low)	(VoI)	-	-	0.5	Vdc	
Current (30 to 52 MHz)	(High)	(loh)	-8	-	-	mA	
(30 to 52 MHz)	(Low)	(loh)	-	-	8	mA	
Current (52.1 to 100 MHz)	(High)	(loh)	-16	-	-	mA	
(52.1 to 100 MHz)	(Low)	(loh)	-	-	16	mA	
Duty Cycle at 50% of Vcc			40	50	60	%	
Rise / Fall Time 10% to 90%			-	-	3	nS	
Optional Duty Cycle: measured at	50% Vcc		45	50	55	%	5

PACKAGE CHARACTERISTICS	TABLE 7.0
Package	Hermetically sealed, metal package.



HV51-xxxG Series HV52-xxxG Series HV53-xxxG Series HV54-xxxG Series HV55-xxxG Series

DESCRIPTION

The Connor-Winfield HV5xxxxG series is a 5.0V HCMOS, 14 Pin DIP hermetically sealed, Voltage Controlled Crystal Oscillator (VCXO). Based on a fundamental crystal design the HV5x-xxxG is designed for phased lock loop applications requiring low jitter and tight frequency stability.

FEATURES

5.0V OPERATION FREQUENCY RANGE: 30 to 100 MHz FREQUENCY STABILITY HV51-xxxG SERIES ±25PPM HV52-xxxG SERIES ±50PPM HV53-xxxG SERIES ±100PPM HV54-xxxG SERIES ±20PPM HV55-xxxG SERIES ±10PPM TEMPERATURE RANGE: 0 to 70°C LOW JITTER <1ps RMS HERMETICALLY SEALED PACKAGE RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

HV54-150G - 077.76M

VCXO CENTER FREQUENCY

Specifications subject to change without notice.

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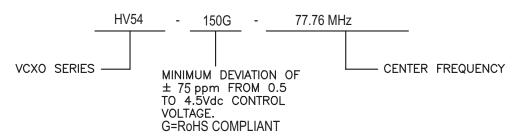
PRODUCT DATA SHEET

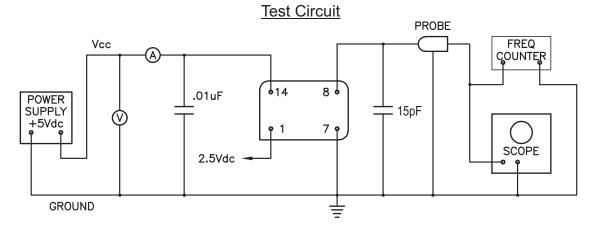
CRYSTAL CONTROLLED OSCILLATORS

Note:

- 1) Frequency stability vs. change in temperature, referenced to frequency measured at 25°C with control voltage @ 2.50Vdc.
- 2) Referenced to Fo @ 25°C. Positive Slope.
- +/-100ppm and +/-120ppm frequency deviation is not available for frequencies above 75 MHz.
- 4) +/-150ppm frequency deviation is not available for frequencies above 50 MHz.
- 5) Add "S" to the part number before the G, Example: HV54-150SG-077.76M.

Example Part Number



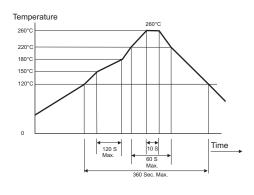


Package Outline and Pin Connections

.025 (.64mm) PIN CONNECTION 1 CONTROL VOLTAGE 7 GROUND (CASE) 8 OUTPUT 14 (+) SUPPLY

Dimensional ±,02" (±0.5mm)
Tolerance: ±.008" (±0.2mm)

Solder Profile



Specifications subject to change without notice.

.018 DIA (.46mm)

.150

(3.81mm)

.798

(20.27mm)

- .600 -(15.24mm)

480

(12.19mm)

0

0

1₀0

0

.260 Max

(6.60mm)

.300

(7.62mm)

.25

(6.35mm)