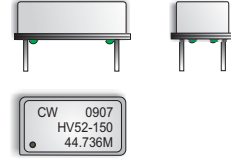


CRYSTAL CONTROLLED OSCILLATORS

14 PIN 5.0V HCMOS VCXO HIGH FREQUENCIES



ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	
Control Voltage	(Vc)	-0.5	-	7	Vdc	

MODEL SPECIFICATIONS

MODEL NUMBER

TABLE 2.0

MODEL NUMBER	Frequency Stability:	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
HV51-xxx	Frequency Stability:	-25	-	25	ppm	1
HV52-xxx	Frequency Stability:	-50	-	50	ppm	1
HV53-xxx	Frequency Stability:	-100	-	100	ppm	1
HV54-xxx	Frequency Stability:	-20	-	20	ppm	1
HV55-xxx	Frequency Stability:	-10	-	10	ppm	1

Pullability Codes (xxx - Add code to the end of the Model Number)

TABLE 3.0

Pullability Code	Frequency Pullability:	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
040	Frequency Pullability:	±20	-	-	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
300	Frequency Pullability:	±150	-	-	ppm	2, 3

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	(Icc)	-	-	35	mA	
> 50 MHz		-	-	60	mA	
Period Jitter		-	3	5	ps rms	
Phase Jitter (BW=12kHz to 20MHz)		-	0.5	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	
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 6.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	4.5	-	-	Vdc	
(Low)	(Vol)	-	-	0.5	Vdc	
Current (30 MHz to 52 MHz) (High)	(Ioh)	-8	-	-	mA	
(30 MHz to 52 MHz) (Low)	(Iol)	-	-	8	mA	
Current (52.1 MHz to 100 MHz) (High)	(Ioh)	-16	-	-	mA	
(52.1 MHz to 100 MHz) (Low)	(Iol)	-	-	16	mA	
Duty Cycle at 50% of Vcc		40	50	60	%	
Optional Duty Cycle add suffix S		45	50	55	%	4

HV51-xxx Series
HV52-xxx Series
HV53-xxx Series
HV54-xxx Series
HV55-xxx Series

DESCRIPTION

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

FEATURES

FREQUENCY RANGE
30 Mhz to 100 MHz
5.0V OPERATION
LOW JITTER <1ps RMS
FREQUENCY STABILITY
HV51-xxx SERIES ±25PPM
HV52-xxx SERIES ±50PPM
HV53-xxx SERIES ±100PPM
HV54-xxx SERIES ±20PPM
HV55-xxx SERIES ±10PPM
TEMPERATURE RANGE: 0 to 70°C
HERMETICALLY SEALED PACKAGE
RoHS 5/6 COMPLIANT

ORDERING INFORMATION

HV52-150 - 044.736M

VCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

PACKAGE CHARACTERISTICS

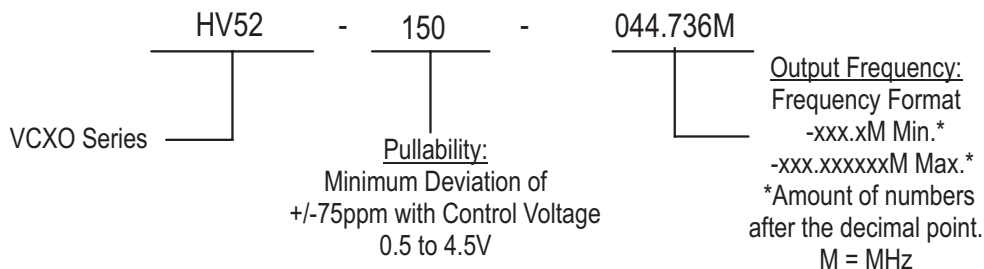
TABLE 7.0

Package	Hermetically sealed, metal package.
Soldering Process	RoHS 5/6 compliant. See solder profile on page 2.

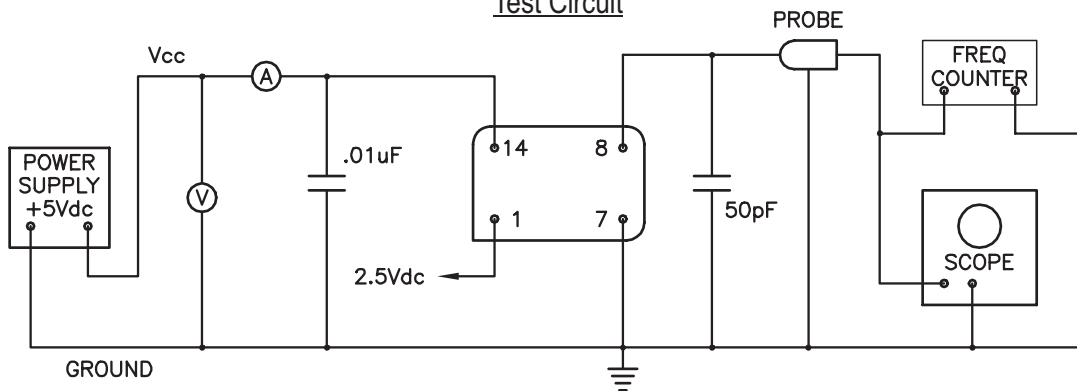
Note:

- 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.
- 3) -200 not available above 75 MHz. -300 not available above 50 MHz.
- 4) Add suffix S to the part number (Example HV51-150S-044.736M).

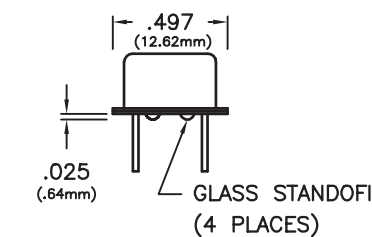
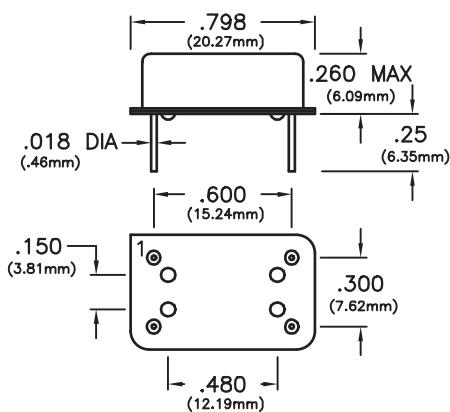
Example Part Number



Test Circuit

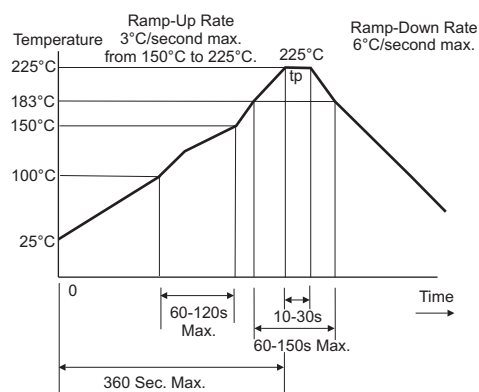


Package Outline and Pin Connections



PIN	CONNECTION
1	CONTROL VOLTAGE
7	GROUND (CASE)
8	OUTPUT
14	(+) SUPPLY

Solder Profile



Specifications subject to change without notice.