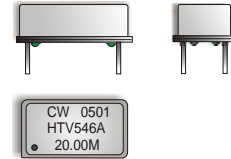


# CRYSTAL CONTROLLED OSCILLATORS

## 5.0V HCMOS VCTCXO 14 Pin DIP Crystal Oscillator



### HTV546A

#### 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	

#### OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	12.8	-	100	MHz	
Frequency Tolerance		-4.6	-	4.6	ppm	2
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.0	5.25	Vdc	
Supply Current	(Icc)	-	15	35	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
Typical Phase Noise Measurements @ 19.44 MHz						
SSB Phase Noise at 10Hz offset		-	-80	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-120	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-130	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-145	-	dBc/Hz	

#### INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage	(Vc)	0.5	2.5	4.5	Vdc	
Frequency Adjust Range (0.5 to 4.5V)		±10	-	-	ppm	3
Frequency Adjust Linearity		-10	-	10	%	
Input Impedance		10k	-	-	Ohm	

#### HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	3.75	-	-	Vdc	
(Low)	(Vol)	-	-	0.5	Vdc	
Current (High)	(Ioh)	-8	-	-	mA	
(Low)	(Iol)	-	-	8	mA	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time 10% to 90%		-	3	5	nS	

#### PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Hermetically sealed, metal package.
---------	-------------------------------------

#### Note:

- 1) Frequency calibration at 25°C, Vc=2.5V, nominal Vcc, after a one minute warm up time.
- 2) Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
- 3) Positive Slope.

#### DESCRIPTION

The Connor-Winfield HTV546A is a 14 pin DIP, 5.0V HCMOS, Voltage Controlled Temperature Compensated Crystal Oscillator (VCTCXO). The HTV546A is designed for use as a SONET/SDH Network Timing Source.

#### FEATURES

- 5.0V OPERATION
- LOW JITTER <1ps RMS
- OVERALL FREQUENCY TOLERANCE ±4.6ppm
- TEMPERATURE RANGE: 0 to 70°C
- HERMETICALLY SEALED DIP PACKAGE

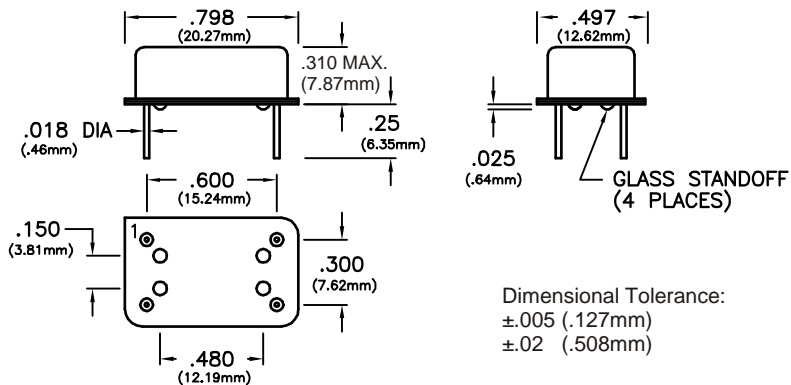
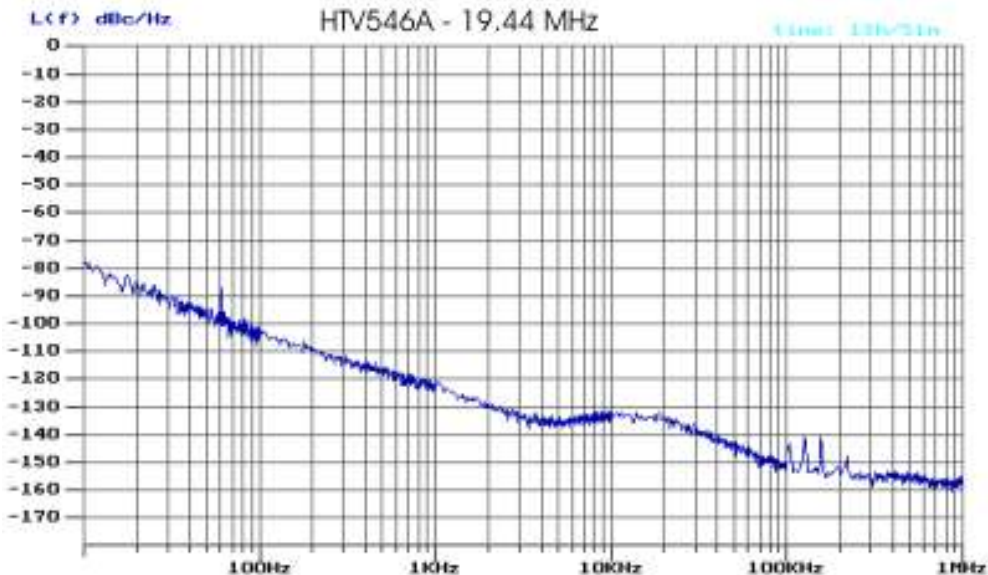
#### ORDERING INFORMATION

HTV546A - 77.76MHz



Specifications subject to change without notice.

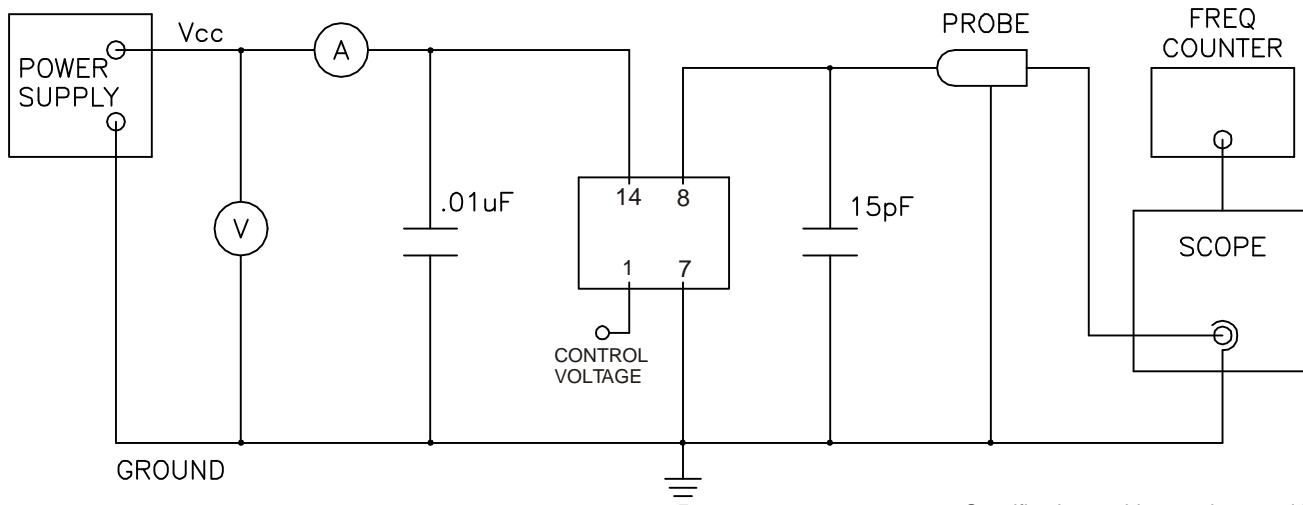
CRYSTAL CONTROLLED OSCILLATORS



Pin	Connection
1	Control Voltage
7	Ground
8	Output
14	Vcc

Dimensional Tolerance:  
±.005 (.127mm)  
±.02 (.508mm)

TEST CIRCUIT



Specifications subject to change without notice.