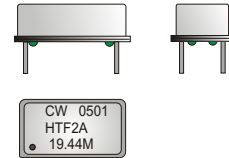


CRYSTAL CONTROLLED OSCILLATORS

5.0V HCMOS TCXO 14 Pin DIP Crystal Oscillator



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	

MODEL SPECIFICATIONS

TABLE 2.0

MODEL HTF2 / HTF2A

HTF2 - Frequency Range	(Fo)	.110	-	12.7999	MHz	
HTF2A - Frequency Range	(Fo)	12.8	-	60	MHz	
Frequency Stability vs. Change in Temperature		-1.0	-	1.0	ppm	
Operating Temperature Range		0	-	50	°C	
Total Frequency Tolerance		-8.5	-	8.5	ppm	1

MODEL SPECIFICATIONS

MODEL HTF3 / HTF3A

HTF3 - Frequency Range	(Fo)	.110	-	12.7999	MHz	
HTF3A - Frequency Range	(Fo)	12.8	-	60	MHz	
Frequency Stability vs. Change in Temperature		-2.5	-	2.5	ppm	
Operating Temperature Range		0	-	70	°C	
Total Frequency Tolerance		-10.0	-	10.0	ppm	1

MODEL SPECIFICATIONS

MODEL HTF4 / HTF4A

HTF4 - Frequency Range	(Fo)	.110	-	12.7999	MHz	
HTF4A - Frequency Range	(Fo)	12.8	-	60	MHz	
Frequency Stability vs. Change in Temperature		-5.0	-	5.0	ppm	
Operating Temperature Range		-30	-	70	°C	
Total Frequency Tolerance		-12.5	-	12.5	ppm	1

MODEL SPECIFICATIONS

MODEL HTF65 / HTF65A

HTF65 - Frequency Range	(Fo)	.110	-	12.7999	MHz	
HTF65A - Frequency Range	(Fo)	12.8	-	60	MHz	
Operating Temperature Range		-40	-	85	°C	
Total Frequency Tolerance		-10	-	10	ppm	1

OPERATING SPECIFICATIONS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Calibration @ 25°C		-2.5	-	2.5	ppm	2
Frequency Aging First Year		-2.0	-	2.0	ppm	
Frequency Aging Ten Years (Including first year)		-5.0	-	5.0	ppm	
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 @ 19.44 MHz						
SSB Phase Noise at 10Hz offset		-	-80	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-105	-	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	

HTFx - Series HTFxA - Series

DESCRIPTION

The Connor-Winfield HTFx-Series and the HTFxA-Series are a 5.0V HCMOS, hermetically sealed, fixed frequency, Temperature Compensated Crystal Oscillator (TCXO). The HTFx-Series and the HTFxA-Series are designed for applications requiring very tight frequency stability.

FEATURES

5.0V OPERATION

LOW JITTER <1ps RMS

FREQUENCY STABILITY:

HTF2 / HTF2A: ±1.0ppm: 0 to 50°C

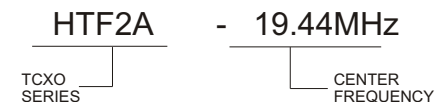
HTF3 / HTF3A: ±2.5ppm: 0 to 70°C

HTF4 / HTF4A: ±5.0ppm: -30 to 70°C

HTF65 / HTF65A: ±10ppm: -40 to 85°C

HERMETICALLY SEALED DIP PACKAGE

ORDERING INFORMATION



Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	4.2	4.5	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
HTFx - Series Current (High)	(loh)	-4	-	-	mA	
(Low)	(loh)	-	-	4	mA	
HTFxA - Series Current (High)	(loh)	-8	-	-	mA	
(Low)	(loh)	-	-	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.
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Note:

- 1) Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
- 2) Referenced to nominal frequency (Fo), after 1-minute warm-up time.

Typical Phase Noise Measurements

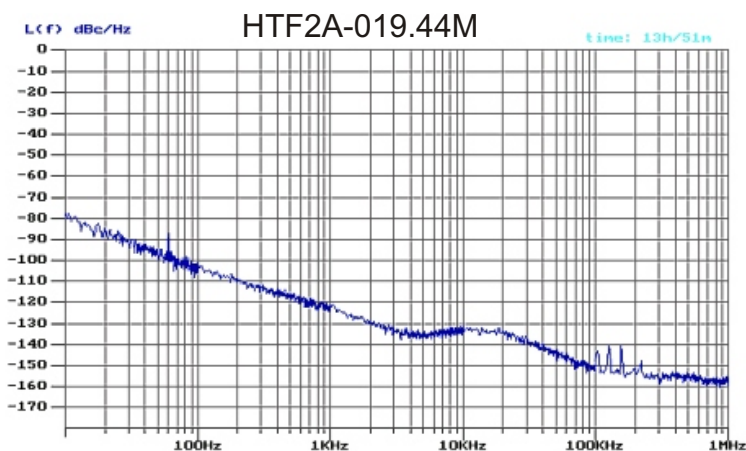
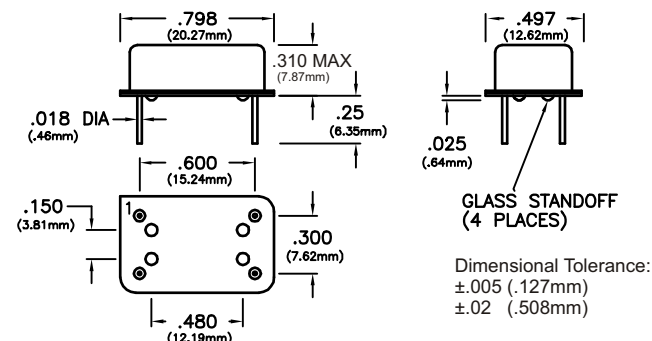
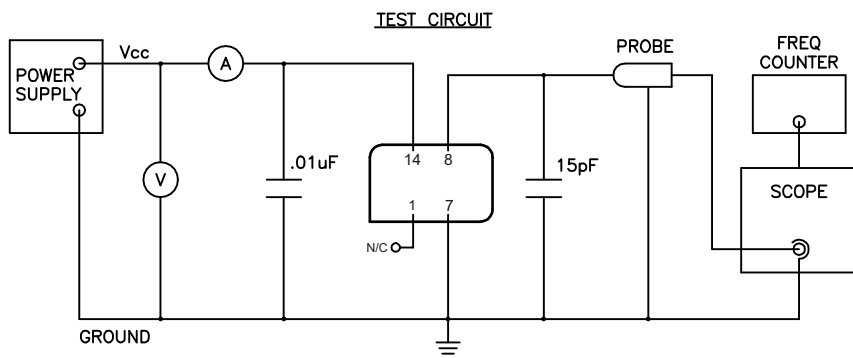


TABLE 6.0

Pin	Connection
1	N/C
7	Ground
8	Output
14	Vcc



Specifications subject to change without notice.