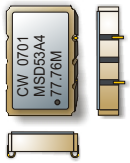
CONNOR WINFIELD

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PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

3.3V SURFACE MOUNT HCMOS CLOCK OSCILLATOR



MSD53A4

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	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.8	-	156.25	MHz	
Total Frequency Tolerance		-100	-	100	ppm	1
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	2.97	3.3	3.63	Vdc	
Supply Current	(Icc)	-	-	50	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 10Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-125	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-140	-	dBc/Hz	

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Tri-state Enable Voltage	(Vih)	≥70%Vcc	-	-	Vdc	2
Tri-state Disable Voltage	(Vil)	-	-	≤30%Vcc	Vdc	2

HCMOS OUTPUT CHARACTERISTICS

TABLE 40

PARAMETER			MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD			-	-	15	pF	
Voltage	(High)	(Voh)	≥ 0.9(Vcc)	-	-	Vdc	
	(Low)	(Vol)	-	-	≤ 0.1(Vcc)	Vdc	
Current	(High)	(Ioh)	-16	-	-	mA	
	(Low)	(Ioh)	-	-	16	mA	
Duty Cycle at 50% of Vcc			45	50	55	%	
Rise / Fall Time 10% to 90%			-	1.5	3	nS	

PACKAGE CHARACTERISTICS

TABLE 50

Package	Hermetically sealed, ceramic package with gold plated J leads.

Note:
1) Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 20 years aging.
2) Oscillator output is enabled with no connection on pad 1

DESCRIPTION

The Connor-Winfield MSD53A4 is a hermetically sealed surface mount 3.3V Crystal Controlled Oscillator (XO) HCMOS/TTL Compatible. The MSD53A4 is designed for applications requiring low jitter and tight stability.

FEATURES

3.V OPERATION

LOW JITTER <1ps RMS

FREQUENCY TOLERANCE: ±100ppm

TEMPERATURE RANGE: 0 to 70°C

TRI-STATE ENABLE/DISABLE FUNCTION

TAPE AND REEL PACKAGING

ORDERING INFORMATION

MSD53A4 - 77.76 MHz

HCMOS CLOCK SERIES

CENTER FREQUENCY

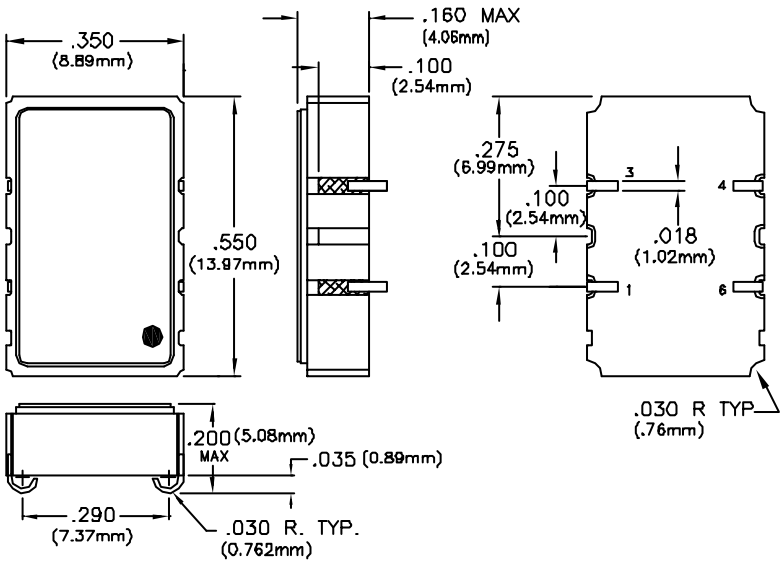
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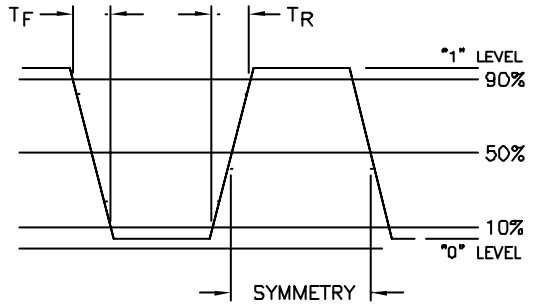
PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

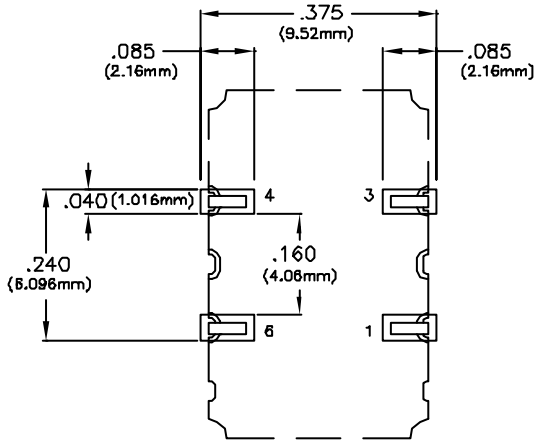


PAD	CONNECTION
1	E/D TRI-STATE
3	GROUND
4	OUTPUT
6	Vcc

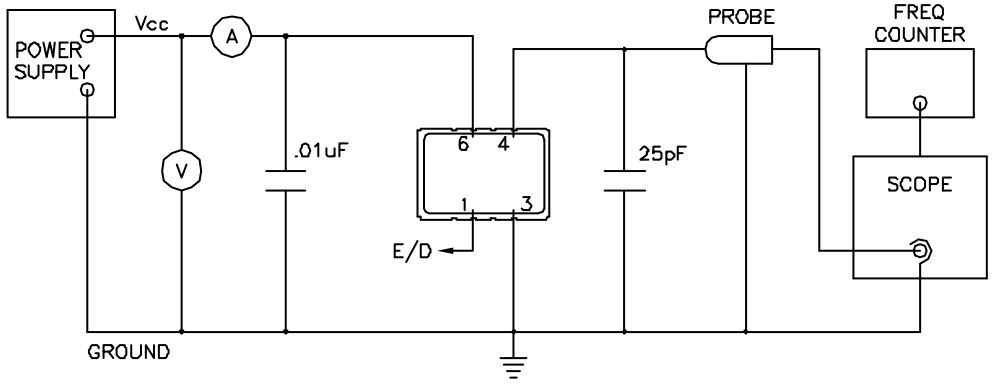
OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT



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