

<b>FREQUENCY STABILITY</b>	
FREQUENCY STABILITY OVERALL INCLUDED LONG TERM AGING 15 YEARS: <math>< \pm 4.6 \text{ ppm}</math>	
HOLDVER STABILITY DURING 24 HOURS INCLUDING LOAD, SUPPLY VOLTAGE AND TEM- PERATURE VARIATION: <math>< \pm 0.28 \text{ ppm (0.56 ppm p-to-p)}</math>	
<b>POWER SUPPLY</b>	
SUPPLY INPUT:	$V_{cc} = 3.3 \text{ V} \pm 0.15 \text{ V}^*$
INPUT CURRENT :	$< 110 \text{ mA @ } +30 \text{ }^\circ\text{C}^*$
INPUT CURRENT :	$< 170 \text{ mA @ } -20 \text{ }^\circ\text{C}^*$
<b>FREQUENCY CONTROL RANGE</b>	
CONTROL VOLTAGE:	Not applicable, pin 1 must be connected to ground (see note 2)
INTERNAL CALIBRATION:	$< \pm 1 \text{ ppm}^*$
<b>OUTPUT</b>	
OUTPUT SIGNAL:	HC-MOS compatible
SYMMETRY:	45 (min.) / 55 (max.) % @ $V_{cc} / 2^*$
RISE AND FALL TIME:	$t_r < 7 \text{ ns}$ $t_f < 7 \text{ ns}^*$
LEVEL „0“ AND „1“:	$< 0.4 \text{ V}$ $> V_{cc} - 0.5 \text{ V}$
FAN OUT (LOAD):	10 LS or 47pF max.
<b>ENVIRONMENT</b>	
OPERABLE TEMP. RANGE:	-40 to +85 °C
STORAGE TEMP. RANGE:	-65 to +125 °C
VIBRATION:	10 to 2000 Hz / 10 g
SHOCK:	2000 g, 0.3 ms, 1/2 sine
PACKAGE:	DIL 14, 4 pins, GND to case
PACKAGE HEIGHT:	8 mm (see packaging info)
<b>WARM-UP</b>	
$\Delta F/F$ :	within spec after 30s @ 0 °C *
CURRENT:	$< 250 \text{ mA}$ during 30s
<b>MISCELLANEOUS</b>	
SHORT TERM STABILITY:	$< 5 \text{ E-10}$ 0.1 s to 30 s Typical 5 E-11 @ 1 s
PHASE NOISE (BW = 1Hz):	10 Hz: -100 dBc / Hz 100 Hz: -130 dBc / Hz 1 KHz: -140 dBc / Hz 10 KHz: -145 dBc / Hz
* Customer's specification on request	

<b>NOTE 1</b>	
	<b>OCXOWST-D</b>
TEMP. RANGE *	0 to +70 °C
	<b>OCXOWST-C</b>
TEMP. RANGE *	-40 to +85 °C

<b>NOTE 2</b>	
On request:	
Possibility of frequency adjustment with control voltage.	

<b>MARKING EXAMPLE</b>			
<b>Micro Crystal</b>		<b>Micro Crystal</b>	
OCXOWST-C		Type	Spec No.
12.800 MHz	09.25	Frequency	Date Code
○	12	○ (PIN 1)	Piece No.

<b>ORDERING INFORMATION EXAMPLE</b>			
<b>O C X O W S T - C 12.8 MHz x x x</b>			
Oscillator Type	OCXO = Oven Controlled Crystal Oscillator	Oscillator output frequency	N° of customer spec.
Oscillator Version	W = low power voltage 3.3V ST = Stratum 3 application		
Temperature Range	C = -40 to +85 °C D = 0 to +70 °C		

<b>STANDARD FREQUENCIES (MHz)</b>					
12.8000	16.3840	19.4400	20.0000	26.0000	40.0000
50.0000	52.0000				

DATE:	October 2009	Revision No.: 3
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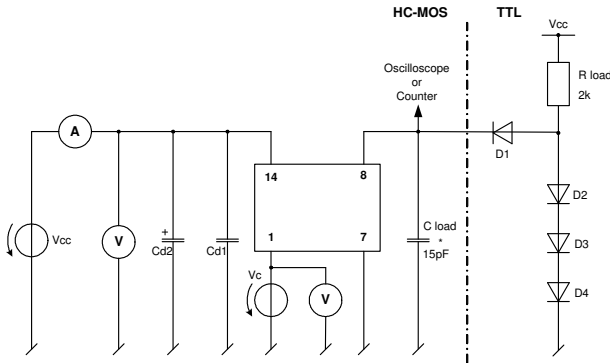
In accordance with our policy of continuous development and improvement,  
we reserve the right to modify the design or the specifications of our products without prior notice.

Headquarters: Micro Crystal AG  
Mühlestrasse 14  
CH-2540 Grenchen  
Switzerland

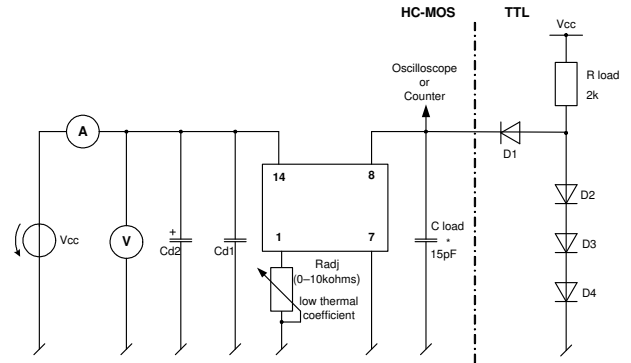
Tel. +41 32 655 82 82  
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Email sales@microcrystal.ch

**Application and Test Circuit:**

Adjustment with voltage

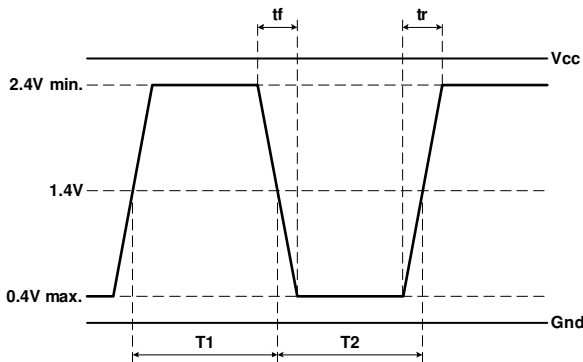


Adjustment with resistor

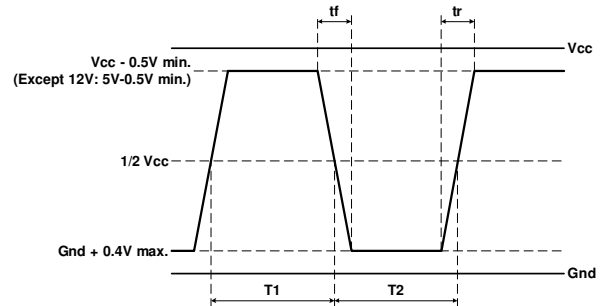


**Waveform Output:**

Waveshape TTL



Waveshape HC-MOS



$$Duty\ Cycle = 100 \times \frac{T1}{T1 + T2} [\%]$$