

<b>FREQUENCY STABILITY OVER:</b>	
OPERATING TEMP. RANGE :	<i>see note 1</i>
LONG TERM AGING 1ST YEAR:	< ±0.7 ppm *
10 YEARS:	< ±4.0 ppm *
SUPPLY VOLTAGE ± 0.2 V	< ±0.1 ppm *
LOAD ±10%:	< ±0.01 ppm
<b>POWER SUPPLY</b>	
SUPPLY INPUT:	V <sub>cc</sub> = 3.3 V ±0.15 V *
INPUT CURRENT :	< 110 mA @ +30 °C *
INPUT CURRENT :	< 170 mA @ -20 °C *
<b>FREQUENCY CONTROL RANGE</b>	
CONTROL VOLTAGE:	<i>see note 2</i>
FREQUENCY DEVIATION:	> ±4 ppm *
RESPONSE SLOPE:	positive
<b>OUTPUT</b>	
OUTPUT SIGNAL:	Sine wave
HARMONICS:	-10 dBc *
SPURIOUS:	-70 dBc *
OUTPUT IMPEDANCE:	50Ω
LEVEL / LOAD:	≤ 20MHz ≥ 4 dBm / 50Ω
	> 20MHz ≥ 0 dBm / 50Ω
<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, ½ sine
PACKAGE:	DIL 14, 4 pins, GND to case
PACKAGE HEIGHT:	8 mm (packaging info)
<b>WARM-UP</b>	
ΔF/F:	within spec after 30s @ 0 °C *
CURRENT:	< 250 mA during 10s
<b>MISCELLANEOUS</b>	
SHORT TERM STABILITY:	< 5 E-10 0.1 s to 30 s Typical 5 E-11 @ 1 s
PHASE NOISE (BW = 1Hz):	10 Hz: -110 dBc / Hz
(typical, @ 10MHz in static conditions)	100 Hz: -135 dBc / Hz
	1 KHz: -145 dBc / Hz
	10 KHz: -150 dBc / Hz
* Customer's specification on request	

<b>NOTE 1</b>	
TEMP. RANGE *	<b>OCXOWS-AR1, AV3</b> 0 to +60 °C
STABILITY *	±0.075 ppm (0.15 ppm peak to peak)
TEMP. RANGE *	<b>OCXOWS-BR1, BV3</b> -20 to +70 °C
STABILITY *	±0.15 ppm (0.3 ppm peak to peak)
TEMP. RANGE *	<b>OCXOWS-CR1, CV3</b> -40 to +85 °C
STABILITY *	±0.25 ppm (0.5 ppm peak to peak)

<b>NOTE 2</b>	
ADJUSTMENT WITH RESISTOR (connected to ground)	<b>OCXOWS-AR1, BR1, CR1</b> 0 to 10 kΩ
INPUT IMPEDANCE	> -4.7 kΩ
ADJUSTMENT WITH VOLTAGE	<b>OCXOWS-AV3, BV3, CV3</b> 0 to 3.3 V
INPUT IMPEDANCE	> 47 kΩ

<b>MARKING EXAMPLE</b>			
<b>Micro Crystal</b>		<b>Micro Crystal</b>	
OCXOWS-BV3		Type	Spec No.
20.000 MHz	09.25	Frequency	Date Code
○	12	○ (PIN 1)	Piece No.

<b>ORDERING INFORMATION EXAMPLE</b>			
O C X O W S - B V 3 20 MHz x x x			
Oscillator Type	O C X O = Oven Controlled Crystal Oscillator		N° of customer spec.
Oscillator Version	W = low power voltage 3.3V S = sine wave	Oscillator output frequency	
Temperature Range	A = 0 to +60 °C; +/-0.075ppm B = -20 to +70 °C; +/-0.15ppm C = -40 to +85 °C; +/-0.25ppm X = custom spec.	Frequency Adjustment	R1 = external resistor V3 = voltage 3.3V Y = custom spec.

<b>STANDARD FREQUENCIES (MHz)</b>					
10.000	12.800	16.000	16.384	19.440	20.000
40.000	50.000	52.000			

DATE:	July 2010	Revision No.: 2
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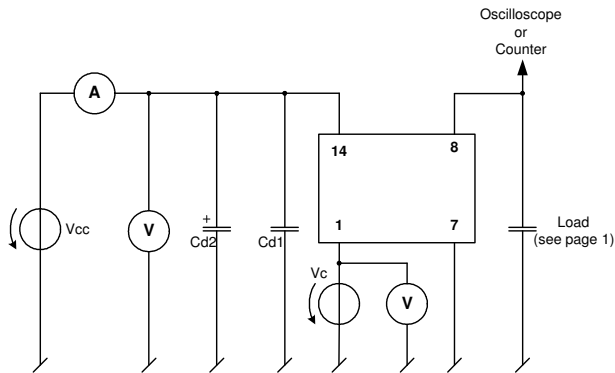
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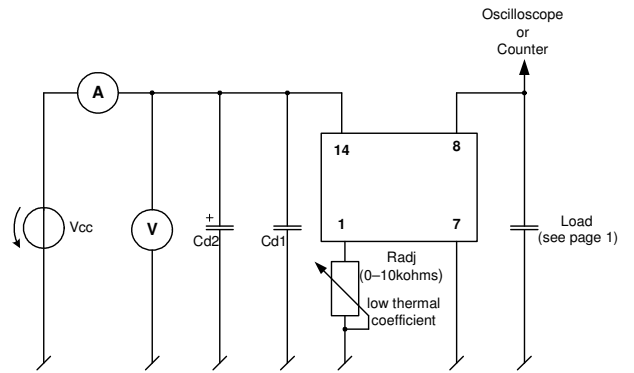
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**Application and Test Circuit:**

Adjustment with voltage



Adjustment with resistor



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