MICRO CRYSTAL SWITZERLAND

OCXOS

Oven Controlled Crystal Oscillator

Sine Wave Output
12 V Power Supply

up to 20 MHz

FREQUENCY STABILITY

OVER:	
OPERATING TEMP. RANGE :	***see note 1***
LONG TERM AGING 1ST YEAR:	*< ±0.7 ppm **
10 YEARS:	*< ±4.0 ppm **
SUPPLY VOLTAGE ± 0.5 V	*< ±0.1 ppm **
LOAD ±10%:	*< ±0.01 ppm*

POWER SUPPLY

SUPPLY INPUT:	*Vcc = 12 V ±0.5 V **
INPUT CURRENT :	*< 25 mA @ +30 °C **
INPUT CURRENT :	*< 40 mA @ -20 °C **

FREQUENCY CONTROL RANGE

CONTROL VOLTAGE:	***see note 2***
FREQUENCY DEVIATION:	*> ±4 ppm **
RESPONSE SLOPE:	*positive*

OUTPUT

OUTPUT SIGNAL:	*Sine wave*
HARMONICS:	*-10 dBc **
SPURIOUS:	*-70 dBc **
LEVEL:	*> 1Vpp < 2Vpp*
LOAD:	*> 1kΩ // 5pF ±10%*

ENVIRONMENT

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*
	(see packaging info)

WARM-UP

ΔF/F:	*within spec after 30s @ 0 °C **
CURRENT:	*< 250 mA during 10s*

MISCELLANEOUS

SHORT TERM STABILITY:	*< 5 E-10 0.1 s to 30 s*
	Typical 5 E-11 @ 1 s
PHASE NOISE (BW = 1Hz):	*1 Hz : - 70 dBc / Hz*
(typical, @ 10MHz in static	*10 Hz : -100 dBc / Hz*
conditions)	*100 Hz : -130 dBc / Hz*
	1 kHz : -140 dBc / Hz

* *Customer's specification on request*

NOTE 1

	OCXOS-AR1, AV5
TEMP. RANGE *	*0 to +60 °C*
STABILITY *	*±0.05 ppm*
	(0.1 ppm peak to peak)
	OCXOS-BR1, BV5
TEMP. RANGE *	*-20 to +70 °C*
STABILITY *	*±0.1 ppm*
	(0.2 ppm peak to peak)
	OCXOS-CR1, CV5
TEMP. RANGE *	*-40 to +85 °C*
STABILITY *	*±0.2 ppm*
	(0.4 ppm peak to peak)

NOTE 2

	OCXOS-AR1, BR1, CR1
ADJUSTMENT WITH RESISTOR *(connected to ground)*	*0 to 10 kΩ*
INPUT IMPEDANCE	*> 4.7 kΩ*
	OCXOS-AV5, BV5, CV5
ADJUSTMENT WITH VOLTAGE	*0 to 5 V*
INPUT IMPEDANCE	*> 47 kΩ*

MARKING EXAMPLE

OCXOS-BV5		*Type*	*Spec No.*
20.000 MHz	01.25	*Frequency*	*Date Code*
○	12	○ *(PIN 1)*	*Piece No.*

ORDERING INFORMATION EXAMPLE

O C X O S - B V 5 20 MHz x x x

Oscillator Type
OCXO = oven controlled Crystal Oscillator

Oscillator Version
S = sine wave

Temperature Range
A = 0 to +60°C; +/-0.05ppm
B = -20 to +70°C: +/-0.1ppm
C = -40 to +85°C; +/-0.2ppm
X = custom spec.

Frequency Adjustment
R1 = external resistor
V5 = voltage 5V
Y = custom spec.

Oscillator output frequency

N° of customer spec.

STANDARD FREQUENCIES (MHz)

10.0000	*12.8000*	*16.0000*	*16.3840*	*19.4400*	*20.0000*

DATE:	June 2003	Revision No.: 8

**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.**

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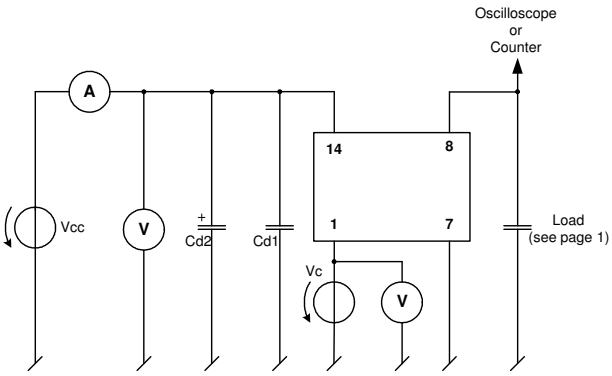
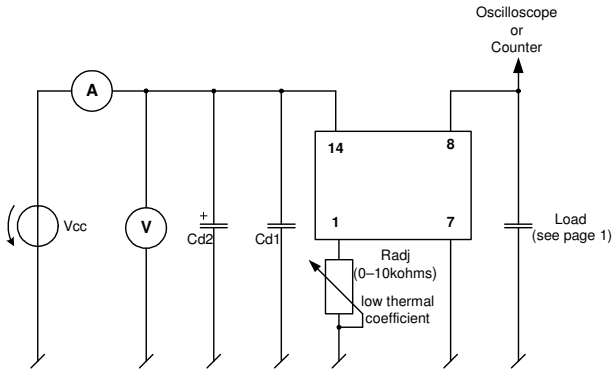
Application and Test Circuit:

Adjustment with voltage



Adjustment with resistor



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