

FREQUENCY STABILITY	
OVER:	
OPERATING TEMP. RANGE :	<i>see note 1</i>
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:	V _{cc} = 12 V ±0.5 V *
INPUT CURRENT :	< 30 mA @ +30 °C *
INPUT CURRENT :	< 45 mA @ -20 °C *
FREQUENCY CONTROL RANGE	
CONTROL VOLTAGE:	<i>see note 2</i>
FREQUENCY DEVIATION:	> ±4 ppm *
RESPONSE SLOPE:	positive
OUTPUT	
OUTPUT SIGNAL:	HC-MOS compatible
SYMMETRY:	40 (min.) / 60 (max.) % @ V _{cc} / 2 *
RISE AND FALL TIME:	tr < 7ns tf < 7 ns *
LEVEL „0“ AND „1“:	< 0.4 V > 5 V -0.5 V
FAN OUT (LOAD):	10 LS
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):	10 Hz: -90 dBc / Hz 100 Hz: -120 dBc / Hz 1 KHz: -130 dBc / Hz 10 KHz: -135 dBc / Hz
* Customer's specification on request	

NOTE 1	
TEMP. RANGE *	OCXOT-AR1, AV5 0 to +60 °C
STABILITY *	±0.05 ppm (0.1 ppm peak to peak)
TEMP. RANGE *	OCXOT-BR1, BV5 -20 to +70 °C
STABILITY *	±0.1 ppm (0.2 ppm peak to peak)
TEMP. RANGE *	OCXOT-CR1, CV5 -40 to +85 °C
STABILITY *	±0.2 ppm (0.4 ppm peak to peak)

NOTE 2	
ADJUSTMENT WITH RESISTOR	OCXOT-AR1, BR1, CR1 0 to 10 kΩ (connected to ground)
INPUT IMPEDANCE	> -4.7 kΩ
ADJUSTMENT WITH VOLTAGE	OCXOT-AV5, BV5, CV5 0 to 5 V
INPUT IMPEDANCE	> 47 kΩ

MARKING EXAMPLE			
Micro Crystal		Micro Crystal	
OCXOT-BV5		Type	Spec No.
20.000 MHz	09.25	Frequency	Date Code
○	12	○ (PIN 1)	Piece No.

ORDERING INFORMATION EXAMPLE			
O C X O T - B V 5 20 MHz x x x			
Oscillator Type	O C X O = oven controlled Crystal Oscillator		N° of customer spec.
Oscillator Version	T = tight tolerance	Oscillator output frequency	
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.

STANDARD FREQUENCIES (MHz)					
10.0000	12.8000	16.0000	16.3840	19.4400	20.0000
26.0000	40.0000	50.0000	52.0000		

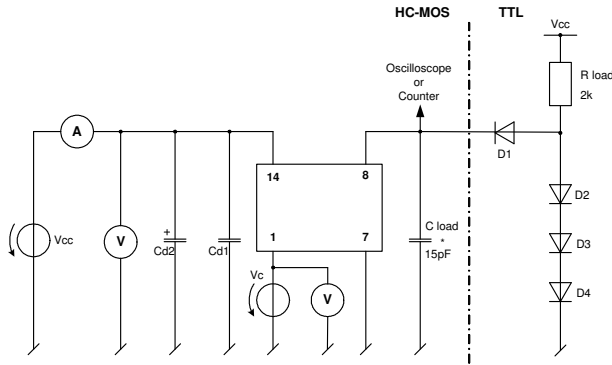
DATE:	October 2009	Revision No.: 8
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In accordance with our policy of continuous development and improvement, we reserve the right to modify the design or the specifications of our products without prior notice.

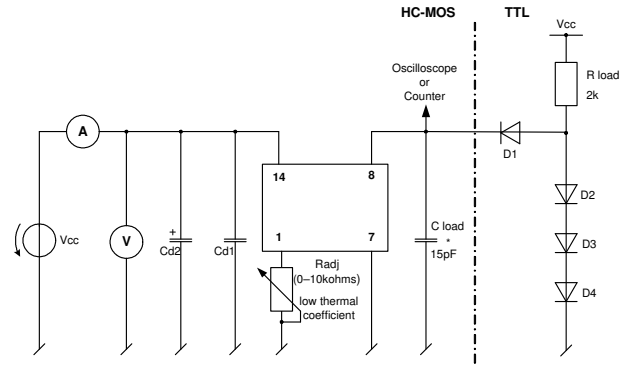
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Application and Test Circuit:

Adjustment with voltage

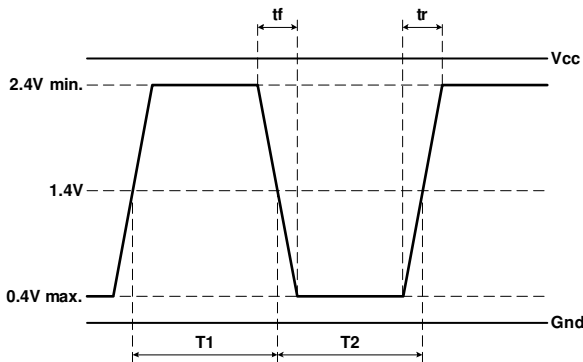


Adjustment with resistor

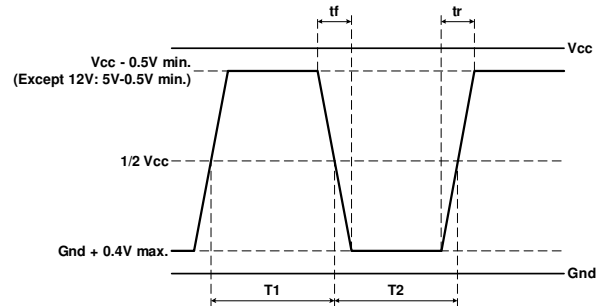


Waveform Output:

Waveshape TTL



Waveshape HC-MOS



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