



PIN	CONNECTION
1	Freq adjustment
7	Ground
8	Output
14	Supply

Scale 1:1

## Features

- ▶ Compact 14-pin DIL package
- ▶ 3.3V supply voltage
- ▶ HCMOS compatible output
- ▶ Very fast warmup
- ▶ Low power consumption
- ▶ Wide temperature range available

## Standard Frequencies

Frequencies in MHz	
10.00000	16.38400
12.80000	19.44000
16.00000	20.00000

## Specifications

Parameters	Product	Option
	MCOCXOW	Codes
<b>Frequency range:</b> 10.0kHz ~ 20.0MHz	■	
<b>Frequency stability:</b> ±0.7ppm max first year ±4ppm max in 10 years ±0.1ppm over $V_{DD} \pm 0.15V$ ±0.01ppm over 10% change in load	■ ■ ■ ■	
<b>Short term stability:</b> $5 \times 10^{-10}$ , 0.1 to 30s $5 \times 10^{-11}$ over 1s typ	■ ■	
<b>Temperature stability:</b> ±0.2ppm max, 0 to +60°C ±0.075ppm max, 0 to +60°C ±0.3ppm max, -20 to +70°C ±0.15ppm max, -20 to +70°C ±0.5ppm max, -40 to +85°C ±0.25ppm max, -40 to +85°C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A TA B TB C TC
<b>Operable temperature range:</b> -40 to +85°C	■	
<b>Storage temperature range:</b> -65 to +125°C	■	
<b>Output waveform:</b> HCMOS compatible '0'=+0.4V max, '1'= $V_{DD}$ -0.5V min 40:60 max	■ ■ ■	
<b>Rise / fall times:</b> 7ns / 7ns max	■	
<b>Frequency adjustment:</b> Control voltage (pin 1) ±4ppm min, 0V ~ 3.3V 'Variable resistor (pins 1 to 7) ±4ppm min, 0 ~ 10kΩ	<input type="checkbox"/> <input type="checkbox"/>	V3 R1
<b>Supply voltage (<math>V_{DD}</math>):</b> +3.3V (±0.15V)	■	
<b>Input current:</b> 100mA max @ +30°C 160mA max @ -20°C	■ ■	
<b>Warm up:</b> within spec after 60s @ 0°C current 250mA max during 30s	■ ■	
<b>Phase noise (typ @ 10MHz):</b> -80dBc/Hz @ 1Hz -110dBc/Hz @ 10Hz -135dBc/Hz @ 100Hz -145dBc/Hz @ 1kHz	■ ■ ■ ■	
<b>Shock &amp; vibration:</b> 2,000G, 0.3ms ½-sine 10.0 ~ 2,000Hz, 10G	■ ■	

■ Standard. □ Optional - Please specify required code(s) when ordering

## Ordering Information

Product name + model code (if standard) + frequency

eg: **MCOCXOWT-AR1 12.80MHz**

**MCOCXOW-BV3 16.3840MHz**

Option code X (eg MCOCXOW/X) denotes a custom spec.

◆ Other combinations of calibration and temperature stability/range are available.