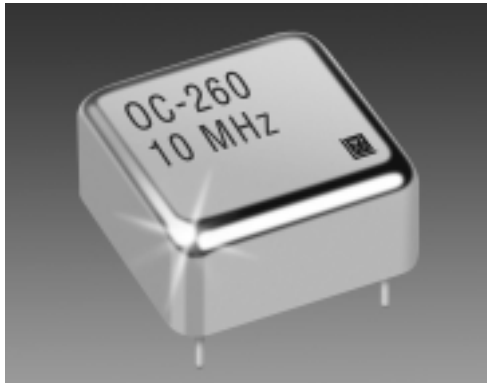


# Oven Controlled Crystal Oscillators (OCXO's)

## OC-260 Series (CO-760)



### Description:

The OC-260 Series OCXO offers excellent temperature stability and aging in a 1" x 1" x 0.52" package.

### Features:

- Frequencies: 5, 10, 12.8, 13, 16.384, 19.44, 20, 20.48 MHz
- Stabilities: As low as  $\pm 1 \times 10^{-8}$
- Temperature Range: As wide as  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Package: 1.0" x 1.0" x 0.52"
- Output: HCMOS, Sinewave
- Supply Voltage: 5 Volts or 3.3 Volts

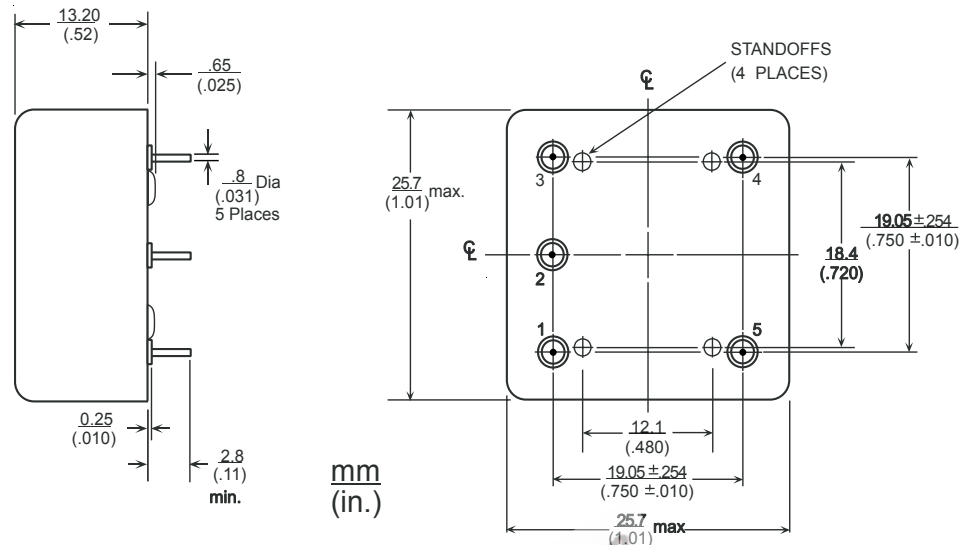
### Performance Characteristics

Parameter	Characteristics
Standard Frequencies:	5.0, 10.0, 12.8, 13.0, 16.384, 19.44, 20.0, 20.48 MHz. Available from 1 to 80 MHz.
Package Size:	25.7 x 25.7 x 13.2 mm (1.0" x 1.0" x 0.52")
Supply Voltage:	<b>C</b> =5 Vdc $\pm 5\%$ <b>D</b> =3.3 Vdc $\pm 5\%$ (HCMOS output only)
Input Power (steady state):	<1.5W @ $+25^{\circ}\text{C}$ ( $-20^{\circ}\text{C}$ / $+70^{\circ}\text{C}$ )
Input Power (turn-on):	<3W ( $-20^{\circ}\text{C}/+70^{\circ}\text{C}$ )
Output Type:	<b>A</b> : HCMOS <b>J</b> : Sinewave; +7 dBm into 50 ohm (+5V supply only)
Output Level:	5 V: "0" <0.5 V, "1" >4.5 V      3.3 V: "0" <0.3 V, "1" >3.0 V (HCMOS output)
Rise/Fall Time $t_r/t_f$ :	<10 ns (10% - 90%, HCMOS)
Symmetry (Duty/Cycle):	50/50 $\pm 10\%$ (@50% Vdd, HCMOS)
Harmonics/subs:	-20 dBc (for sinewave output)
Temperature Stability:	<b>B-208</b> : $\pm 2 \times 10^{-8}$ over 0/50°C <b>B-107</b> : $\pm 1 \times 10^{-7}$ over 0/50°C <b>D-408</b> : $\pm 4 \times 10^{-8}$ over -20/70°C <b>D-107</b> : $\pm 1 \times 10^{-7}$ over -20/70°C <b>F-107</b> : $\pm 1 \times 10^{-7}$ over -40/85°C <b>F-207</b> : $\pm 2 \times 10^{-7}$ over -40/85°C Note: Tighter stability options are available - contact factory.
Aging:	<b>A</b> : $1 \times 10^{-8}$ /day, $2 \times 10^{-6}$ /year <b>C</b> : $1 \times 10^{-9}$ /day, $3 \times 10^{-7}$ /year <b>B</b> : $3 \times 10^{-9}$ /day, $1 \times 10^{-6}$ /year
Short Term Stability (Allan Deviation):	$5 \times 10^{-11}$ /second (with aging <b>A</b> or <b>B</b> ) $1 \times 10^{-11}$ /second (with aging <b>C</b> )
Phase Noise: (typical @ 10 MHz)	-110 dBc/Hz @ 10 Hz      -150 dBc/Hz @ 10 kHz -130 dBc/Hz @ 100 Hz      -150 dBc/Hz @ 50 kHz -145 dBc/Hz @ 1 kHz
Frequency vs. Supply:	$5 \times 10^{-9}$ /percent (with Aging <b>A</b> or <b>B</b> ); $2 \times 10^{-9}$ /percent (with Aging <b>C</b> )
Electrical Frequency Adjust:	$10 \times 10^{-6}$ typical range (with Aging <b>A</b> or <b>B</b> ) $2 \times 10^{-6}$ typical range (with Aging <b>C</b> )
Mechanical Configuration:	Pins for PCB mounting

# Oven Controlled Crystal Oscillators (OCXO's)

## OC-260 Series (CO-760)

### Outline Drawing



### Pin Out Information

Pin	Function
1	Output
2	GND, Case
3	Electrical Frequency Adjustment Input or N/C*
4	N/C or Reference Voltage Output*
5	Supply Voltage
Pin numbers are for reference only, and may not appear on unit.	

### Ordering Information

OC - 260 - C A D - 107 C A - 20 MHz

**Product Family**  
OC = OCXO

**Package**  
260 = 25.7x25.7 mm  
Thru-hole

**Supply Voltage**  
C = 5.0V ±5%  
D = 3.3V ±5%

**Output**  
A = HCMOS (100K // 10 pF Load)  
J = Sinewave +7 dBm/50 ohm  
(5.0V supply only)

**Frequency**  
1 - 80 MHz

**Electrical Frequency Adjust**  
10 x 10<sup>-6</sup> typical range (with Aging A or B)  
2 x 10<sup>-6</sup> typical range (with Aging C)

**Aging**  
A = 1 x 10<sup>-8</sup>/day, 2 x 10<sup>-6</sup>/year  
B = 3 x 10<sup>-9</sup>/day, 1 x 10<sup>-6</sup>/year  
C = 1 x 10<sup>-9</sup>/day, 3 x 10<sup>-7</sup>/year

**Temperature Stability\***  
B-107 = ±1x10<sup>-7</sup> over 0°C to +50°C  
B-208 = ±2x10<sup>-8</sup> over 0°C to +50°C  
D-107 = ±1x10<sup>-7</sup> over -20°C to +70°C  
D-408 = ±4x10<sup>-8</sup> over -20°C to +70°C  
F-207 = ±2x10<sup>-7</sup> over -40°C to +85°C  
F-107 = ±1x10<sup>-7</sup> over -40°C to +85°C

\*Other stability options are available upon request