



| PIN | CONNECTION      |
|-----|-----------------|
| 1   | Freq adjustment |
| 7   | Ground          |
| 8   | Output          |
| 14  | Supply          |

Scale 1:1

## Features

- ▶ **Compact 14-pin DIL package**
- ▶ **5.0V supply voltage**
- ▶ **Sinewave 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      |
|--|------------------|-------------|
|  | MCOXOVS          | Codes       |
| <b>Frequency range:</b> 10.0 ~ 20.0MHz   | ■                |             |
| <b>Frequency stability:</b><br>±0.7ppm max first year<br>±4ppm max in 10 years<br>±0.1ppm over $V_{DD} \pm 0.2V$<br>±0.01ppm over 10% change in load | ■<br>■<br>■<br>■ |             |
| <b>Short term stability:</b><br>$5 \times 10^{-10}$ , 0.1 to 30s<br>$5 \times 10^{-11}$ over 1s typ  | ■<br>■           |             |
| <b>Temperature stability:</b><br>±0.075ppm max, 0 to +60°C<br>±0.15ppm max, -20 to +70°C<br>±0.25ppm max, -40 to +85°C                               | □<br>□<br>□      | A<br>B<br>C |
| <b>Operable temperature range:</b><br>-40 to +85°C   | ■                |             |
| <b>Storage temperature range:</b><br>-65 to +125°C   | ■                |             |
| <b>Output waveform:</b><br>Clipped sine, 1 ~ 2V p-p<br>Harmonics -10dBc<br>Spurious -70dBc   | ■<br>■<br>■      |             |
| <b>Test load:</b> 1 k $\Omega$ // 5pF ( $\pm 10\%$ )   | ■                |             |
| <b>Frequency adjustment:</b><br>Control voltage (pin 1)<br>±4ppm min, 0.5V ~ 5.0V<br>Variable resistor (pins 1 to 7)<br>±4ppm min, 0 ~ 10k $\Omega$  | □<br>□           | V5<br>R1    |
| <b>Supply voltage (<math>V_{DD}</math>):</b><br>+5.0V ( $\pm 0.2V$ )   | ■                |             |
| <b>Input current:</b> 70mA max @ +30°C<br>110mA max @ -20°C  | ■<br>■           |             |
| <b>Warm up:</b><br>within spec after 30s @ 0°C<br>current 250mA max during 10s   | ■<br>■           |             |
| <b>Phase noise (typ @ 10MHz):</b><br>-80dBc/Hz @ 1Hz<br>-110dBc/Hz @ 10Hz<br>-135dBc/Hz @ 100Hz<br>-145dBc/Hz @ 1kHz                                 | ■<br>■<br>■<br>■ |             |
| <b>Shock &amp; vibration:</b><br>2,000G, 0.3ms ½-sine<br>10.0 ~ 2,000Hz, 10G   | ■<br>■           |             |

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

## Ordering Information

Product name + model code (if standard) + frequency

eg: **MCOXOVS-AR1 10.0MHz**

**MCOXOVS-BV5 16.384MHz**

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

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