

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

## Features

- ▶ **Compact 14-pin DIL package (SMD optional)**
- ▶ **5.0V supply voltage**
- ▶ **HCMOS compatible output**
- ▶ **Very fast warmup**
- ▶ **Low power consumption**
- ▶ **Wide temperature range available**

## Specifications

| Parameters  | Product                    | Option Codes                  |
|---|----------------------------|-------------------------------|
|   | MCOXOV                     |                               |
| <b>Frequency range:</b><br>10.0kHz ~ 54.0MHz  | ■                          |                               |
| <b>Frequency stability:</b><br>±0.7ppm max first year<br>±4ppm max in 10 years<br>±0.1ppm over $V_{DD}$ ±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>±0.2ppm max, 0 to +60°C<br>±0.075ppm max, 0 to +60°C<br>±0.3ppm max, -20 to +70°C<br>±0.15ppm max, -20 to +70°C<br>±0.5ppm max, -40 to +85°C<br>±0.25ppm max, -40 to +85°C | □<br>□<br>□<br>□<br>□<br>□ | A<br>TA<br>B<br>TB<br>C<br>TC |
| <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>HCMOS compatible<br>'0'=+0.4V max, '1'= $V_{DD}$ -0.5V min<br>40:60 max  | ■<br>■<br>■                |                               |
| <b>Rise / fall times:</b> 7ns / 7ns max   | ■                          |                               |
| <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 ~ 10kΩ   | □<br>□                     | V5<br>R1                      |
| <b>Supply voltage (<math>V_{DD}</math>):</b><br>+5.0V (±0.2V)   | ■                          |                               |
| <b>Input current:</b> 80mA max @ +30°C<br>120mA 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>-100dBc/Hz @ 10Hz<br>-130dBc/Hz @ 100Hz<br>-140dBc/Hz @ 1kHz<br>-145dBc/Hz @ 10kHz   | ■<br>■<br>■<br>■           |                               |
| <b>Shock &amp; vibration:</b><br>2,000G, 0.3ms ½-sine<br>10.0 ~ 2,000Hz, 10G  | ■<br>■                     |                               |
| <b>Package:</b> Through hole 14 pin DIL<br>25x22mm SMD carrier PCB<br>Formed leads SMD  | ■<br>□<br>□                | D1<br>D2                      |

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

## Ordering Information

Product name + option codes + frequency

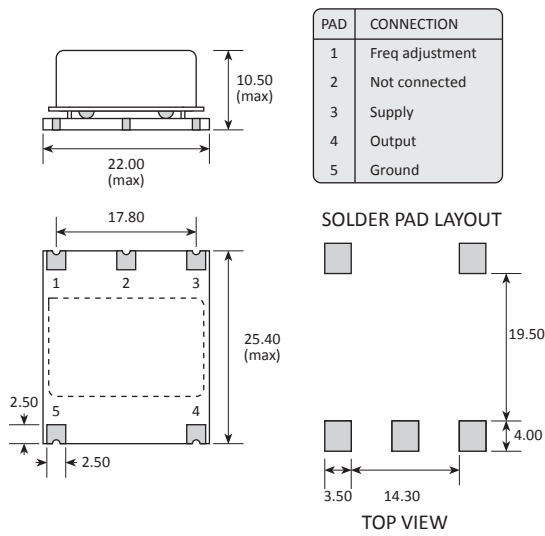
eg: **MCOXOV-AR1 12.80MHz**

**MCOXOV-TBV5 16.3840MHz**

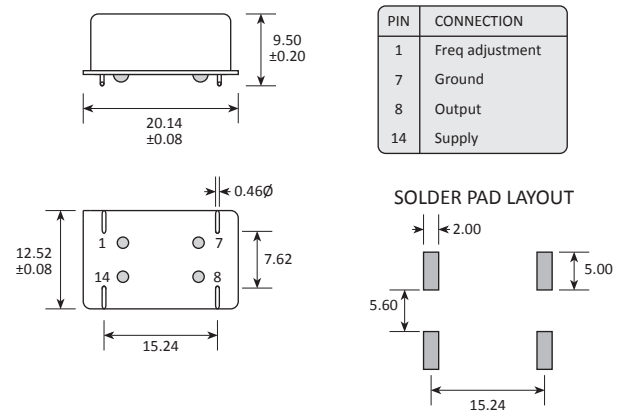
Option code X (eg MCOXOV/X) denotes a custom spec.

♦ Product is NOT designed to withstand 260°C reflow processing

## Option D1



## Option D2



## Soldering Profile

