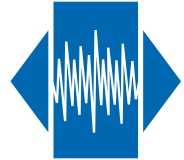


# MCO-1S

SMD Clock Oscillator  
HCMOS / TTL

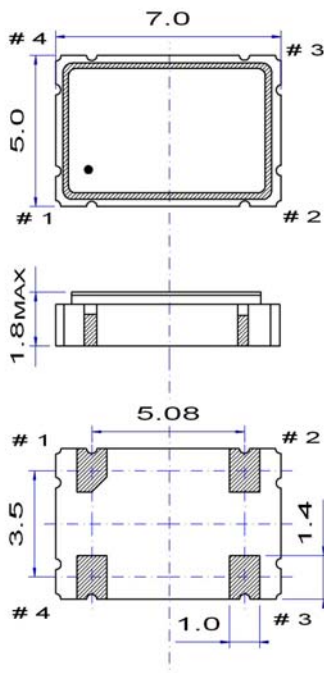
QuartzCom  
the communications company



## Features

- Applications: telecommunications, instrumentation, automotive
- Output frequency up to 200 MHz
- Low phase jitter < 1.0 ps
- Highly shock and vibration resistant

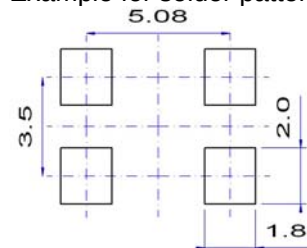
| Parameter                          |               | Specification                                                                  |             |                                                                                  |                 |
|------------------------------------|---------------|--------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------|-----------------|
|                                    |               | MCO-1S18                                                                       | MCO-1S25    | MCO-1S3                                                                          | MCO-1S5         |
| Frequency range                    |               | 12 kHz ~ 200 MHz                                                               |             |                                                                                  | 0.012 ~ 110 MHz |
| Standard frequencies               |               | 11.0592, 20, 25.0, 40.0, 44.0, 80.0, 106.25 & 125 MHz                          |             |                                                                                  | 20, 40 & 80 MHz |
| Supply voltage                     |               | +1.8 V ±5 %                                                                    | +2.5 V ±5 % | +3.3 V ±10 %                                                                     | +5.0 V ±10 %    |
| Supply current                     | 0.03 ~ 70 MHz | < 20 mA                                                                        | < 25 mA     | < 30 mA                                                                          | < 35 mA         |
|                                    | 71 ~ 125 MHz  | < 25 mA                                                                        | < 30 mA     | < 35 mA                                                                          | < 40 mA         |
|                                    | 126 ~ 200 MHz | < 30 mA                                                                        | < 35 mA     | < 45 mA                                                                          |                 |
| Frequency stability (*)            |               | ±25 ~ ±50 ppm                                                                  |             |                                                                                  |                 |
| Output signal                      |               | HCMOS / TTL compatible                                                         |             |                                                                                  |                 |
| Output level                       |               | V <sub>OH</sub> ≥ 0.9 Vdc                                                      |             | V <sub>OL</sub> ≤ 0.1 Vdc                                                        |                 |
| Output load                        |               | 15 pF ~ 25 pF                                                                  |             | 15 pF ~ 50 pF                                                                    |                 |
| Jitter (rms)                       |               | < 1 ps @ 12 kHz ~ 20 MHz from carrier frequency                                |             |                                                                                  |                 |
| Symmetry                           |               | 45 ~ 55 % @ ½ Vdc                                                              |             |                                                                                  |                 |
| Rise / fall time                   |               | 3 ~ 8 ns                                                                       |             |                                                                                  |                 |
| Tri-state function                 |               | pin #1 = high or open<br>pin #1 = low                                          |             | pin #3 ➡ signal<br>pin #3 ➡ high impedance                                       |                 |
| Operating temperature range        |               | -20 ~ +70 °C<br>-40 ~ +85 °C<br>-55 ~ +125 °C                                  |             | commercial application<br>industrial application<br>automotive & avionic applic. |                 |
| Storage temperature range          |               | -55 ~ +125 °C                                                                  |             |                                                                                  |                 |
| Packaging units                    |               | tape & reel                                                                    |             | 500 or 1.000 pieces                                                              |                 |
| (*) All inclusive:                 |               | frequency stability vs. temperature, tolerance, aging, supply & load variation |             |                                                                                  |                 |
| Customer specifications on request |               |                                                                                |             |                                                                                  |                 |



## Pin function

- # 1 Tri-state
- # 2 GND
- # 3 Output
- # 4 Vdc

## Example for solder pattern



Do not design any conductive path between the pattern

## Example for IR reflow soldering temperature

