

# OCO-M36BS

Through hole OCXO  
Sine wave

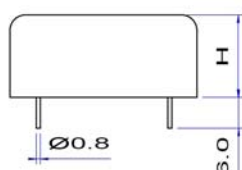
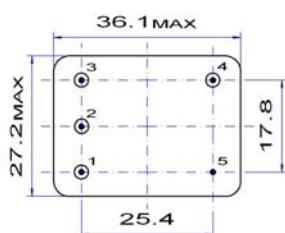


## Features

- Applications: PLL, VSAT, frequency synthesizers
- High frequency: up to 120 MHz
- Short warm-up time: < 2 min.
- Low phase noise – floor of < -165 dBc/Hz

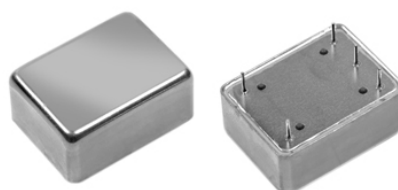
| Parameter                                                   | Specification                               |                                  |
|-------------------------------------------------------------|---------------------------------------------|----------------------------------|
|                                                             | OCO-M36BS5                                  | OCO-M36BS12                      |
| Frequency range                                             | 48.0000 ~ 120.0000 MHz                      |                                  |
| Standard frequencies                                        | 48.00, 56.00, 60.00, 80.00 & 100.00 MHz     |                                  |
| Frequency stability<br>vs. operating temperature range      | $\leq \pm 1.0 \times 10^{-7}$               | over -40 ~ +70 °C                |
|                                                             | $\leq \pm 7.5 \times 10^{-8}$               | over -20 ~ +70 °C                |
|                                                             | $\leq \pm 5.0 \times 10^{-8}$               | over -10 ~ +60 °C                |
| vs. supply voltage change                                   | $\leq \pm 1 \times 10^{-7}$                 | ±5 %                             |
| vs. load change                                             | $\leq \pm 5 \times 10^{-8}$                 | ±5 %                             |
| vs. aging after 30 days of operation                        | $\leq \pm 3 \times 10^{-7}$                 | 1 <sup>st</sup> year             |
| Output waveform                                             | Sine wave > 300 mV (rms)                    | Sine wave > 400 mV (rms)         |
| Output Load                                                 | 50 Ω                                        | ±5 %                             |
| Supply voltage                                              | +5.0 V ±5 %                                 | +12 V ±5 %                       |
| Steady-state current consumption @ +25 °C                   | < 300 mA                                    | < 150 mA                         |
| Warm-up time                                                | < 2 min                                     | < ±1 × 10 <sup>-7</sup> @ +25 °C |
| Frequency pulling range                                     | > ±3 × 10 <sup>-6</sup>                     | positive slope                   |
| Vcontrol (Vc) via external voltage                          | 0 ~ +4 V                                    | 0 ~ +8 V                         |
| Reference voltage output (Vref)                             | +4.0 V                                      | +8.0 V                           |
| Phase noise<br>@ 100 MHz carrier frequency & for Vdc = 12 V | < -98 dBc/Hz                                | @ 10 Hz                          |
|                                                             | < -128 dBc/Hz                               | @ 100 Hz                         |
|                                                             | < -150 dBc/Hz                               | @ 1 kHz                          |
|                                                             | < -165 dBc/Hz                               | @ 10 kHz                         |
| Harmonics                                                   | < -30 dBc                                   |                                  |
| Operating temperature range                                 | -10 ~ +60 °C, -20 ~ +70 °C, or -40 ~ +70 °C |                                  |
| Storage temperature range                                   | -55 ~ +85 °C                                |                                  |
| Case height                                                 | 16.0 mm                                     |                                  |

| Environmental test |                                                                                 |
|--------------------|---------------------------------------------------------------------------------|
| vibration          | acceleration: 5 g; 10 Hz up to 500 Hz and down to 10 Hz; all 3 axes, 4.5 h/axis |
| shock              | 100 g, half-sine, 3 ms (3 shocks each, 6 directions)                            |

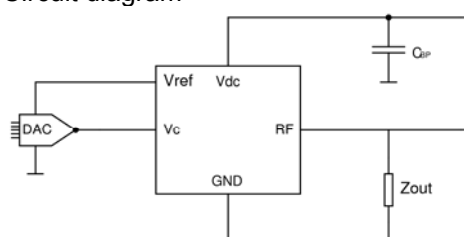


## Pin function

- # 1 Vc
- # 2 Vref
- # 3 Vdc
- # 4 RF output
- # 5 GND



## Circuit diagram



$C_{BP} = 0.01 \text{ mF}$

$Z_{out} = 50 \Omega$

2002/95/EC RoHS compliant

12 May, 10