

# OCO-M36AGS

## Low G-sensitivity OCXO Sine wave

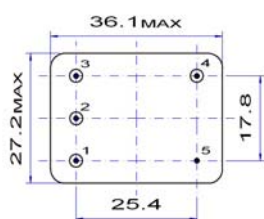


### Features

- Low G-sensitivity stability  $1.0 \times 10^{-9}$  /g
- High frequency stability vs. temperature (up to  $\pm 7.5 \times 10^{-9}$ )
- Low phase noise optional

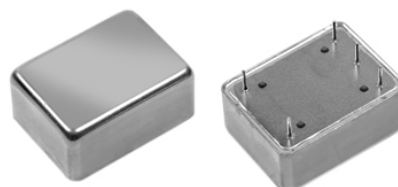
Parameter	Specification	
	OCO-M36AGS5	OCO-M36AGS12
Frequency range	5.0000 ~ 20.0000 MHz	
Standard frequencies	5.00, 10.00, 12.80, 13.00, 16.384 & 20.00 MHz	
Frequency stability vs. operating temperature range	$\leq \pm 2.0 \times 10^{-9}$	over -40 ~ +85 °C
	$\leq \pm 1.0 \times 10^{-9}$	over -20 ~ +70 °C
	$\leq \pm 7.5 \times 10^{-10}$	over -10 ~ +60 °C
vs. supply voltage change	$\leq \pm 5 \times 10^{-10}$	$\pm 5$ %
vs. load change	$\leq \pm 5 \times 10^{-10}$	$\pm 5$ %
vs. aging after 30 days of operation	$\leq \pm 3 \times 10^{-8}$	1 <sup>st</sup> year
Short term stability	$< 5 \times 10^{-12}$	Allan deviation per 1 s
G-sensitivity (in the range 0 ~ 500 Hz)	$< 1.5 \times 10^{-9}$ /g	optional $< 1.0 \times 10^{-9}$ /g
Output waveform	sine wave	$> 300$ mV (rms)
Output load	50 $\Omega$	$\pm 5$ %
Supply voltage	+5.0 V $\pm 5$ %	+12 V $\pm 5$ %
Steady-state current consumption @ +25 °C	$< 400$ mA	$< 150$ mA
Peak current consumption during warm-up time	$< 950$ mA	$< 400$ mA
Warm-up time	$< 3$ min	$< \pm 1 \times 10^{-7}$ @ +25 °C
Frequency pulling range	$> \pm 4 \times 10^{-7}$	positive slope
Voltage control (Vc)	0 ~ +4.5 V	0 ~ +5.0 V
Reference voltage output (Vref)	+4.5 V	+5.0 V
Phase noise @ 10 MHz carrier frequency Low phase noise for Vdc = 12 V	$< -130$ dBc/Hz	@ 10 Hz
	$< -153$ dBc/Hz	@ 100 Hz
	$< -158$ dBc/Hz	@ 1 kHz
	$< -160$ dBc/Hz	@ 10 kHz
Harmonics	$> 30$ dBc	
Operating temperature range	-10 ~ +60 °C, -20 ~ +70 °C, -40 ~ +70 °C or -40 ~ +85 °C	
Storage temperature range	-55 ~ +85 °C	
Case height (H)	12.7 mm or 16.0 mm	

Environmental test	
vibration	acceleration: 5 g; 10 Hz up to 200 Hz and down to 10 Hz; all 3 axes, 4.5 h/axis
shock	75 g, half-sine, 3 ms (3 shocks each, 6 directions)

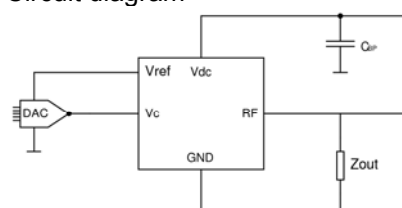


### Pin function

- # 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 Dec. 10