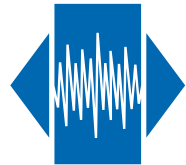


# OCO-M14H

Through hole OCXO  
HCMOS

QuartzCom  
the communications company



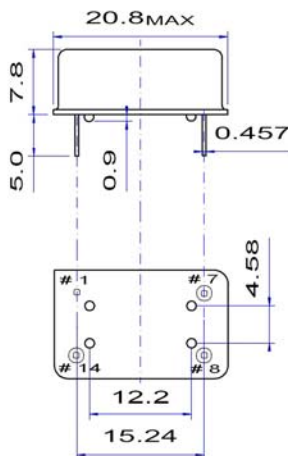
## Features

- Applications: GPS, base-station, synchronisation, satellite-modem
- Small case size (DIL14 / 4 pin)
- Wide operating temperature range from -40 up to +85 °C
- Short warm up time of < 30 s

Parameter	Specification		
Frequency range	10.0000 ~ 52.0000 MHz		
Standard frequencies	10.00, 12.80, 16.000, 16.384, 19.44, 20.00 & 40.00 MHz		
Frequency stability vs. operating temperature range (tighter stability on request)	≤ ±0.20 ppm	0.3 ppm (peak to peak)	over -40 ~ +85 °C
	≤ ±0.15 ppm	0.2 ppm (peak to peak)	over -20 ~ +70 °C
	≤ ±0.075 ppm	0.1 ppm (peak to peak)	over -10 ~ +60 °C
vs. supply voltage change	≤ ±0.10 ppm	±0.2 V	
vs. load change	≤ ±0.01 ppm	±10 %	
vs. aging after 30 days of operation	≤ ±0.30 ppm	1 <sup>st</sup> year	
vs. long term aging	≤ ±2.50 ppm	10 years	
Short term stability	< 5 × 10 <sup>-10</sup>	Allan deviation over 0.1 ~ 30 s	
Output waveform	HCMOS	V <sub>OH</sub> > 0.9 V <sub>dc</sub> V <sub>OL</sub> < 0.1 V <sub>dc</sub>	
Output load	10 LS-TTL	±5 %	
Rise / Fall time	< 5 ns		
Supply voltage (1)	+5.0 V	±0.2 V	
Steady-state current consumption @ +25 °C	< 80 mA		
Warm-up time @ 25 °C	< 30 s	within spec	
Frequency pulling range	> ±3 ppm	positive slope	
V <sub>control</sub> (V <sub>c</sub> ) via external voltage	0.5 ~ +5.0 V		
V <sub>control</sub> (V <sub>c</sub> ) via external potentiometer	10 kΩ		
Phase noise @ 10 MHz carrier frequency	-100 dBc/Hz	@	10 Hz
	-130 dBc/Hz	@	100 Hz
	-140 dBc/Hz	@	1 kHz
	-145 dBc/Hz	@	10 kHz
Operating temperature range	-10 ~ +60 °C, -20 ~ +70 °C or -40 ~ +85 °C		
Storage temperature range	-65 ~ +125 °C		
(1) Supply voltage 3.3 V and 12 V on request			

## Environmental test

vibration	acceleration: 10 g; 10 Hz up to 2'000 Hz and down to 10 Hz; all 3 axes, 4,5 h/axis
shock	2'000 g, half-sine, 3 ms, (3 shocks each, 6 directions)

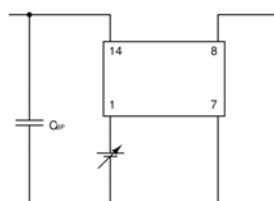


## Pin function

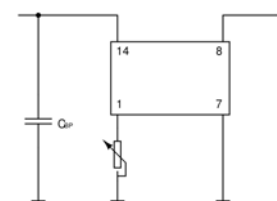
- # 1 V<sub>c</sub>
- # 7 GND
- # 8 RF output
- # 14 V<sub>dc</sub>



## External voltage



## External potentiometer



2002/95/EC RoHS compliant

12 May. 10

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BUREAU VERITAS  
Certification

