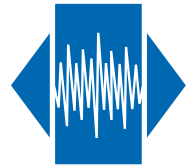


# OCO-SM14H

Through hole OCXO  
HCMOS

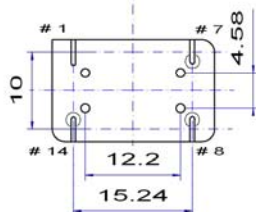
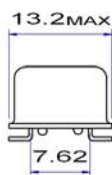
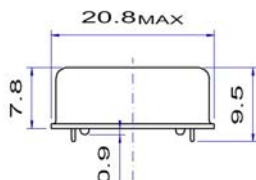


## Features

- 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 ~ 60.0000 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 x 10 <sup>-10</sup> Allan deviation over 0.1 ~ 30 s
Output waveform	HCMOS    V <sub>OH</sub> > 0.9 Vdc    V <sub>OL</sub> < 0.1 Vdc
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
Vcontrol (Vc) via external voltage	0.5 ~ +5.0 V
Vcontrol (Vc) 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	

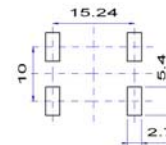
Environmental test	
vibration	acceleration: 10 g; 10 Hz up to 2'000 Hz and down to 10 Hz; all 3 axes, 4,5 h/axis
shock	2'000 g, half-sine, 3 ms, (3 shocks each, 6 directions)



Pin function:

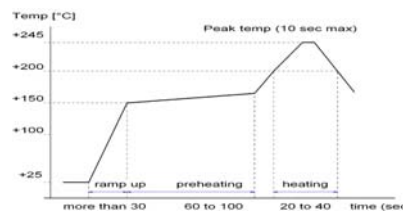
- # 1 Vc
- # 7 GND
- # 8 RF Output
- # 14 Vdc

Example for solder pattern



Do not design any conductive path between the patters

Example for IR reflow soldering temperature



2002/95/EC RoHS compliant

13 May, 10