

OCO-M25AH

Through hole OCXO
HCMOS

QuartzCom
the communications company



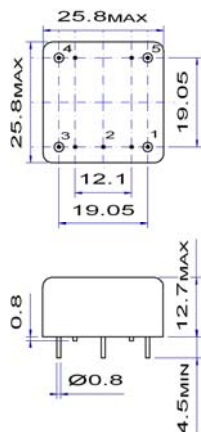
Features

- Applications: CDMA, 3G, base station, networking, instrumentation
- High frequency stability vs. temperature
- Wide operating temperature range: -40 up to +85 °C
- Low aging

Parameter	Specification	
	OCO-M25AH3	OCO-M25AH5
Frequency range	10.0000 ~ 30.0000 MHz	
Standard frequencies	10.00, 12.80, 13.00, 16.384, 20.00, 25.00 & 30.00 MHz	
Frequency stability vs. operating temperature range	$\leq \pm 2 \times 10^{-8}$	over -40 ~ +85 °C
	$\leq \pm 1 \times 10^{-8}$	over -40 ~ +70 °C
	$\leq \pm 5 \times 10^{-9}$	over -10 ~ +60 °C
vs. supply voltage change	$\leq \pm 5 \times 10^{-9}$	±5 %
vs. load change	$\leq \pm 5 \times 10^{-9}$	±5 %
vs. aging after 30 days of operation	$\leq \pm 3 \times 10^{-8}$	1 st year
Short term stability	$< 1 \times 10^{-11}$	Allan deviation per 1 s
Output waveform	HCMOS	$V_{OH} > 0.9 V_{dc}$ $V_{OL} < 0.1 V_{dc}$
Output load	10 kΩ // 15 pF	±10 %
Supply voltage (*)	+3.3 V ±5 %	+5.0 V ±5 %
Steady-state current consumption @ +25 °C	< 450 mA	< 200 mA
Warm-up time	< 2 min	$< \pm 1 \times 10^{-7}$ @ +25 °C
Frequency pulling range	$> \pm 5 \times 10^{-7}$	positive slope
Vcontrol (Vc) via external voltage	0 ~ +3.0 V	0 ~ +4.5 V
Vcontrol (Vc) via external potentiometer	20 kΩ	
Reference voltage output (Vref)	+3.0 V	+4.5 V
Phase noise @ 13 MHz carrier frequency	< -115 dBc/Hz	@ 10 Hz
	< -140 dBc/Hz	@ 100 Hz
	< -145 dBc/Hz	@ 1 kHz
	< -150 dBc/Hz	@ 10 kHz
Operating temperature range	-10 ~ +60 °C, -20 ~ +70 °C, -40 ~ +70 °C or -40 ~ +85 °C	
Storage temperature range	-55 ~ +85 °C	

(*) 12 V as supply voltage on request

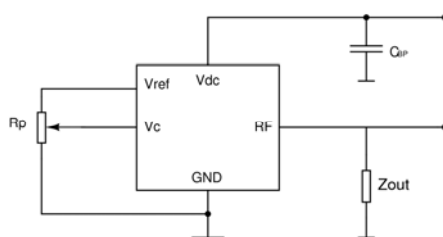
Environmental test	
vibration	acceleration: 10 g; 10 Hz up to 500 Hz and down to 10 Hz; all 3 axes, 4.5 h/axis
shock	100 g, half-sine, 3 ms (3 shocks each, 6 directions)



Pin function

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

Circuit diagram



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

$Z_{out} = 10 \text{ k}\Omega // 15 \text{ pF}$



2002/95/EC RoHS compliant

12 May. 10