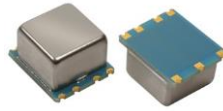


OCO-SMAH

SMD OCXO HCMOS



QuartzCom
the communications company



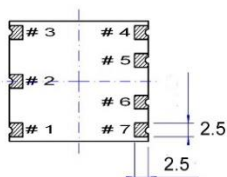
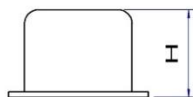
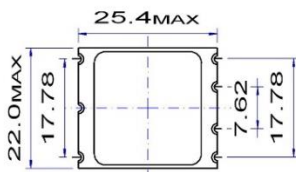
Features

- Frequency: 10.000 MHz to 40.000 MHz
- Supply Voltage option: 3.3V 5.0V & 12.0V

Parameter	Specification		
	OCO-SMAH3	OCO-SMAH5	OCO-SMAH12
Frequency Range	10.000 ~ 40.000 MHz		
Standard Frequencies	10MHz 12.8MHz 13MHz 16.384MHz 20MHz		
<u>Operating Temperature Range</u> Code °C	EH 0 / +60	GH -10 / +60	JK -20 / +70
			NK -40 / +70
			NN -40 / +85
			Z Custom
Frequency Stability Code	50n		
vs <u>Operating Temperature Range</u> *Note 2	$\leq \pm 50 \times 10^{-9}$		
vs. Supply Voltage change [Vdc] $\pm 5\%$	$\leq \pm 3 \times 10^{-9}$		
vs. Load change $\pm 5\%$	$\leq \pm 3 \times 10^{-9}$		
vs. Aging after 30 days of operation *Note 2	Fn ≤ 19 MHz : $\leq \pm 3 \times 10^{-8}$ / year		Fn > 19MHz : $\leq \pm 1 \times 10^{-7}$ / year
Short term Stability for Fo 10MHz *Note 2	$\leq 1 \times 10^{-11}$ @ 1s		
Output waveform	HCMOS		
Supply Voltage [Vdc]	+3.3 V $\pm 5\%$	+5.0 V $\pm 5\%$	+12.0 V $\pm 5\%$
Output Level	V _{OL} < 0.4V V _{OH} > 2.4V	V _{OL} < 0.5V V _{OH} > 4.0V	V _{OL} < 0.5V V _{OH} > 4.5V
Output Load	10k Ω / 15pF		
Supply Voltage [Vdc]	+3.3 V $\pm 5\%$	+5.0 V $\pm 5\%$	+12.0 V $\pm 5\%$
Steady-state current consumption @ +25 °C	< 320 mA	< 215 mA	< 90 mA
Warm-up current consumption @ +25 °C	< 800 mA	< 530 mA	< 220 mA
Warm-up time @ +25 °C	< 180s		< $\pm 1 \times 10^{-7}$
Electronic Frequency Control [EFC] range	> $\pm 4 \times 10^{-7}$ positive slope		
Voltage Control [Vc]	0 ~ +2.8 V	0 ~ +4.5 V	0 ~ +5.0 V
Reference voltage output [Vref]	+2.8 V	+4.5 V	+5.0 V
Phase Noise @ 10MHz [dBc/Hz]	Vdc +3.3 V	Vdc +5.0 V	Vdc +12.0 V
	1 Hz	≤ -85	≤ -90
	10 Hz	≤ -115	≤ -120
	100 Hz	≤ -130	≤ -135
	1 kHz	≤ -140	≤ -145
	10 kHz	≤ -145	≤ -150
Storage temperature range	-55 ~ +85 °C		
Environmental test			
Vibration	acceleration: 5 g; 10 Hz up to 500 Hz and down to 10 Hz; all 3 axes		
Shock	75 g, half-sine, 3 ms		

Note 1: unless otherwise specified conditions are @ 25°C still air

Note 2: all combination not possible (consult factory)



Pin function

- 1 # Vc.
- 2 # Vref.
- 3 # Vdc.
- 4 # RF output
- 5 # Not connected
- 6 # Not connected
- 7 # GND

H = 12.5 mm

Ordering Guide:

OCO-SMAH5-JK20n-10MHz

Vdc OTR

Connection circuit

