

OCO-M20BH

Through hole OCXO
HCMOS

QuartzCom
the communications company



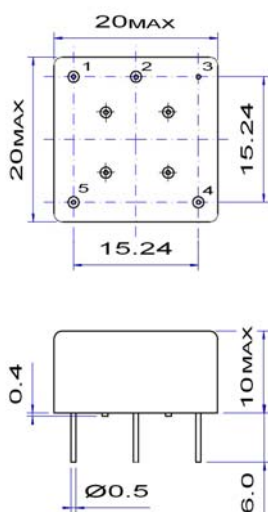
Features

- Applications: CDMA, 3G, networking, instrumentation
- High frequency stability vs. temperature
- Low aging

Parameter	Specification	
	OCO-M20BH3	OCO-M20BH5
Frequency range	10.0000 ~ 25.0000 MHz	
Standard frequencies	10.00, 12.80, 13.00, 16.384 & 20.00 MHz	
Frequency stability vs. operating temperature range	$\leq \pm 5 \times 10^{-8}$	over -40 ~ +70 °C
	$\leq \pm 2 \times 10^{-8}$	over -20 ~ +70 °C
	$\leq \pm 5 \times 10^{-9}$	± 5 %
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vs. load change	$\leq \pm 5 \times 10^{-9}$	± 5 %
vs. aging after 30 days of operation	$\leq \pm 5 \times 10^{-8}$	1 st year
Short term stability	$< 1 \times 10^{-11}$	Allan deviation per 1 s
Output waveform	HCMOS	
Output waveform	$V_{OH} > 3.0 \text{ V}$ $V_{OL} < 0.3 \text{ V}$	$V_{OH} > 4.5 \text{ V}$ $V_{OL} < 0.5 \text{ V}$
Output load	10 k Ω // 15 pF	± 10 %
Supply voltage	+3.3 V ± 5 %	+5.0 V ± 5 %
Steady-state current consumption @ +25 °C	< 250 mA	< 150 mA
Warm-up time	< 3 min	$< \pm 1 \times 10^{-7}$ @ +25 °C
Frequency pulling range	$> \pm 5 \times 10^{-7}$	positive slope
Vcontrol (Vc) via external voltage	0 ~ +2.8 V	0 ~ +4.5 V
Vcontrol (Vc) via external potentiometer	20 k Ω	
Reference voltage output (Vref)	+2.8 V	+4.5 V
Phase noise @ 13 MHz carrier frequency	< -120 dBc/Hz	@ 10 Hz
	< -140 dBc/Hz	@ 100 Hz
	< -145 dBc/Hz	@ 1 kHz
	< -150 dBc/Hz	@ 10 kHz
Operating temperature range	20 ~ +70 °C or -40 ~ +70 °C	
Storage temperature range	-55 ~ +85 °C	

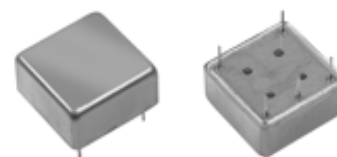
Environmental test

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)

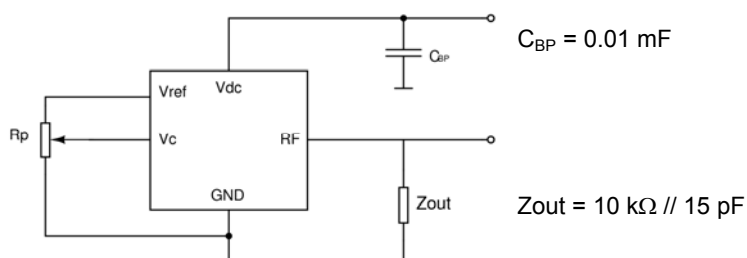


Pin function

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



Circuit diagram



2002/95/EC RoHS compliant

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QuartzCom AG
sales@quartzcom.com

QuartzCom Asia
sales-asia@quartzcom.com

QuartzCom USA
sales-usa@quartzcom.com

www.quartzcom.com

ISO 9001
BUREAU VERITAS
Certification

