

# OCO-M20BH

OCXO HCMOS



**QuartzCom**  
the communications company



## Features

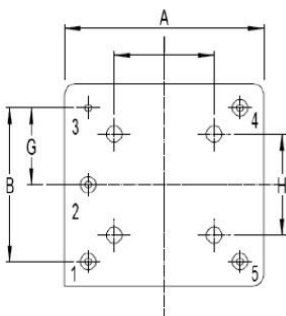
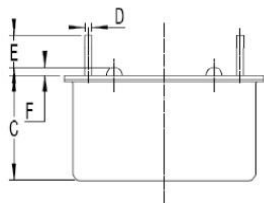
- Frequency: 10MHz to 25 MHz
- Supply Voltage option: 3.3V 5.0V

Parameter	Specification						
	OCO-M20BH3			OCO-M20BH5			
Frequency Range	10.000 ~ 25.000 MHz						
Standard Frequencies	10MHz 12.8MHz 13MHz 16.384MHz 20MHz						
<u>O</u> perating <u>T</u> emperature <u>R</u> ange	<b>Code</b>	<b>EH</b>	<b>GH</b>	<b>JK</b>	<b>NK</b>	<b>NN</b>	<b>Z</b>
	°C	0 / +60	-10 / +60	-20 / +70	-40 / +70	-40 / +85	Custom
<b>Frequency Stability</b>	<b>Code</b>	<b>50n</b>		<b>20n</b>		<b>10n</b>	
vs <u>O</u> perating <u>T</u> emperature <u>R</u> ange *Note 2		$\leq \pm 50 \times 10^{-9}$		$\leq \pm 20 \times 10^{-9}$		$\leq \pm 10 \times 10^{-9}$	
vs. Supply Voltage change [ Vdc ] $\pm 5\%$		$\leq \pm 5 \times 10^{-9}$					
vs. Load change $\pm 5\%$		$\leq \pm 5 \times 10^{-9}$					
vs. Aging after 30 days of operation *Note 2		$\leq \pm 3 \times 10^{-8}$		1 <sup>st</sup> year			
Short term Stability for Fo 10MHz *Note 2		$\leq 1 \times 10^{-11}$		@ 1s			
<b>Output waveform</b>	<b>HCMOS</b>						
Output Level	V <sub>OL</sub> < 0.3V V <sub>OH</sub> > 3.0V			V <sub>OL</sub> < 0.5V V <sub>OH</sub> > 4.5V			
Output Load	10kΩ / 15pF						
<b>Supply Voltage [ Vdc ]</b>	<b>+3.3 V <math>\pm 5\%</math></b>			<b>+5.0 V <math>\pm 5\%</math></b>			
Steady-state current consumption @ +25 °C	< 250 mA			< 250 mA			
Warm-up current consumption @ +25 °C	< 700 mA			< 650 mA			
Warm-up time @ +25 °C	< 180s			< $\pm 1 \times 10^{-7}$			
<b>Electronic Frequency Control [ EFC ] range</b>	> $\pm 5 \times 10^{-7}$			positive slope			
Voltage Control [ Vc ]	0 ~ +3.0 V			0 ~ +4.0 V			
Reference voltage output [ Vref ]	+3.0 V			+4.0 V			
<b>Phase Noise @ 10MHz [ dBc/Hz ]</b>		<b>HCMOS</b>					
	<b>Option</b>	<b><math>\leq 13\text{MHz}</math></b>		<b>&gt;13MHz</b>			
	<b>10 Hz</b>	$\leq -120$		$\leq -105$			
	<b>100 Hz</b>	$\leq -140$		$\leq -125$			
	<b>1 kHz</b>	$\leq -145$		$\leq -135$			
	<b>10 kHz</b>	$\leq -150$		$\leq -145$			
	<b>100 kHz</b>	$\leq -150$		$\leq -145$			
Storage temperature range	-55 ~ +85 °C						
<b>Environmental test</b>							
Vibration	acceleration: 10 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)

### Dimensions:



Symbol	Dimension (mm)	
	Min	Max
A		21.6
B	14.74	15.74
C		11
D	0.4	0.6
E	4.0	5.0
F	0.5	0.7
G	7.52	7.72
H	10.1 nominal	
I	10.1 nominal	

## Ordering Guide:

### OCO-M20BH3-NK20n-10MHz

Vdc OTR

### Connection circuit

