

# MXO5040 Series

## 2x2 in., 15.0 Volt, HCMOS/Sinewave, DOCXO



- Double oven OXCO features exceptional stability and ultra low aging
- Ideal for cellular base stations, GPS timing systems, test equipment and wireless base stations

Ordering Information	
Product Series	MXO5040
Temperature Range	1: 0°C to +70°C
Stability	V: $\pm 5.0 \times 10^{-10}$ Y: $\pm 2.0 \times 10^{-10}$
Crystal Cut	A: AT Cut S: SC Cut
Output Type	H: HCMOS Compatible S: Sinewave
Package Type	D5: 5 Pin Through Hole D6: 6 Pin Through Hole
Frequency (Customer Specified)	00.0000 MHz

T	S	V	Y
1	A	S	

A = AT Cut  
S = SC Cut

PARAMETER	SC-cut		AT-cut
	Frequency Range	10 MHz	
Temperature Range	0°C to +70°C		0°C to +70°C
Temperature Stability (referenced to 35°C)	$\pm 2.0 \times 10^{-10}$		$\pm 5.0 \times 10^{-10}$
Supply Voltage	+15 Vdc $\pm 5\%$		+15 Vdc $\pm 5\%$
Aging Over 1 Year	$\pm 1.0 \times 10^{-8}$		$\pm 3.0 \times 10^{-8}$
Aging Per Day	$\pm 2.0 \times 10^{-10}$		$\pm 5.0 \times 10^{-10}$
Current @ 25°C steady state @ turn on, all temps	180 mA max 750 mA max		180 mA max 750 mA max
Start-up Time	5 sec max		5 sec max
Warm-up Time @ 0°C	Freq. within $\pm 3.5 \times 10^{-8}$ in 20 min max		Freq. Within $\pm 5.0 \times 10^{-8}$ in 20 min max
Input Impedance	>30 k $\Omega$		>30 k $\Omega$
Tuning Voltage Range	0 - 10 V		0 - 10 V
Center Frequency Voltage	5 $\pm 0.5$ V		5 $\pm 0.5$ V
Frequency Tuning Range	$\pm 0.25$ to $\pm 0.5 \times 10^{-6}$		$\pm 0.5$ to $\pm 1.0 \times 10^{-6}$
Short Term Stability	1.0 x 10 <sup>-11</sup> /sec		2.0 x 10 <sup>-11</sup> /sec
Phase Noise @	10 MHz	15 MHz	10 MHz
1 Hz	-90 dBc/Hz	-80 dBc/Hz	-80 dBc/Hz
10 Hz	-120 dBc/Hz	-120 dBc/Hz	-115 dBc/Hz
100 Hz	-140 dBc/Hz	-130 dBc/Hz	-135 dBc/Hz
1 kHz	-145 dBc/Hz	-135 dBc/Hz	-145 dBc/Hz
10 kHz	-150 dBc/Hz	-140 dBc/Hz	-145 dBc/Hz
<b>Sinewave Version</b>			
Spurious & Subharmonics	< -85 dBc	< -45 dBc	< -85 dBc
Harmonics	< -40 dBc	< -30 dBc	< -40 dBc
Output Level into 50 $\Omega$	+7 $\pm 2$ dBm	+12 $\pm 1$ dBm	+7 $\pm 1$ dBm
<b>HCMOS Version</b>			
Duty Cycle	40/60		40/60
Load	2 Gates		2 Gates

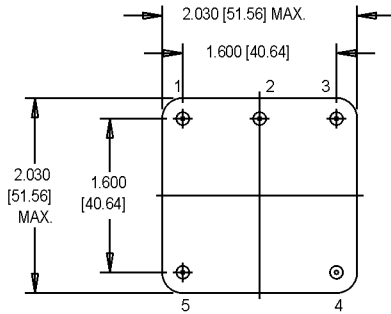
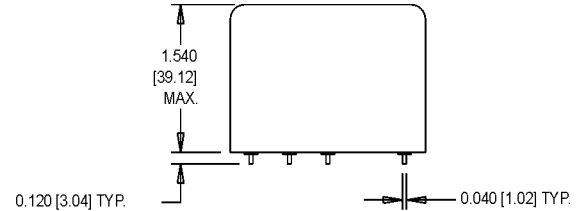
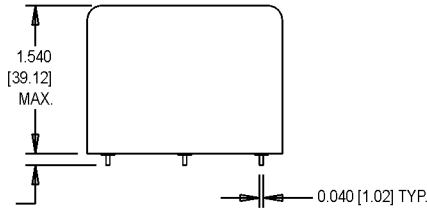
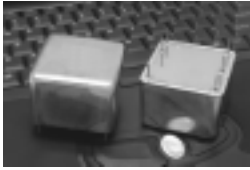
Electrical Specifications

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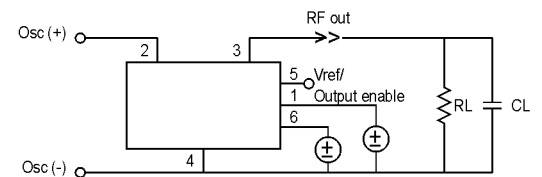
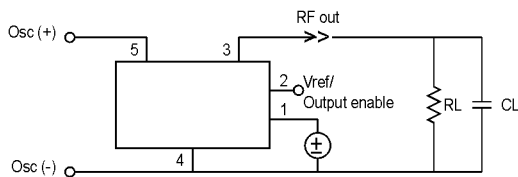
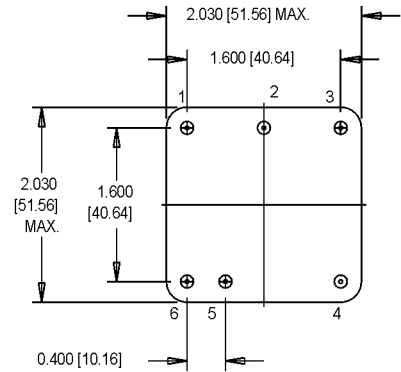
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## 2x2 in., 15.0 Volt, HCMOS/Sinewave, DOCXO



DIMENSIONS ARE SHOWN  
IN INCHES [mm].



### Pin Connections

PIN	FUNCTION
1	Frequency Adjust
2	Vref/Output Enable
3	RF Output
4	Case Ground and Supply Return
5	Supply (+)

### Pin Connections

PIN	FUNCTION
1	Frequency Adjust (Coarse)
2	Supply (+)
3	RF Output
4	Case Ground and Supply Return
5	Vref/Output Enable
6	Frequency Adjust (Fine)

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