

XO5040 Series

2x2 inch, 15.0 Volt, HCMOS/Sinewave, DOCXO

- Double oven OCXO with exceptional stability
- An ultra low aging, SC-cut resonator

Model	Frequency (MHz)	Temperature Range (°C)	Temperature Stability (referenced to 35°C)	Aging Over 1 year	Supply Voltage
XO5040 and XO514X	10	0 to +70	$\pm 2 \times 10^{-10}$	$\pm 1.0 \times 10^{-8}$	+15 Vdc $\pm 5\%$
Options	5 to 15	Consult Factory			+12 Vdc $\pm 5\%$

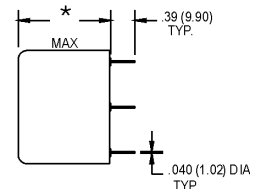
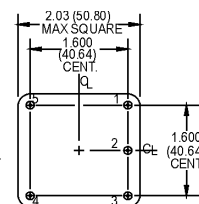
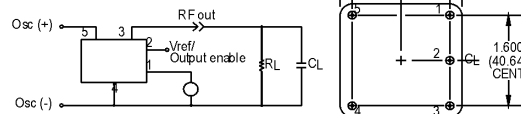
Additional Specifications	SC-Cut	AT-Cut		
Aging per day	$\pm 2.0 \times 10^{-10}$	$\pm 5.0 \times 10^{-10}$		
Current*	*250/180 mA max @ 25°C steady state 750 mA max @ Turn on, all temps	*250/180 mA max @ 25°C steady state 750 mA max @ Turn on, all temps		
Start-up time	5 sec max	5 sec max		
Warm-up 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		
Electronic frequency control				
Input impedance	>30 k Ω	>30 k Ω		
Tuning voltage range	0 – 10 V	0 – 10 V		
Center frequency voltage	5 ± 0.5 V	5 ± 0.5 V		
Frequency tuning range	± 0.25 to $\pm 0.5 \times 10^{-6}$	± 0.5 to $\pm 1.0 \times 10^{-6}$		
Short term stability	$1.0 \times 10^{-11}/\text{sec}$	$2 \times 10^{-11}/\text{sec}$		
Phase Noise @	5MHz	10MHz	15MHz	10MHz
1Hz	-100 dbc/Hz	-90 dbc/Hz	-80 dbc/Hz	-80 dbc/Hz
10 Hz	-120 dbc/Hz	-120 dbc/Hz	-120 dbc/Hz	-115 dbc/Hz
100 Hz	-140 dbc/Hz	-140 dbc/Hz	-130 dbc/Hz	-135 dbc/Hz
1 kHz	-145 dbc/Hz	-145 dbc/Hz	-135 dbc/Hz	-145 dbc/Hz
10 kHz	-145 dbc/Hz	-150 dbc/Hz	-140 dbc/Hz	-145 dbc/Hz
Sinewave Version				
Spurious & subharmonics	<-40 dBc	<-85 dBc	<-45 dBc	<-85 dBc
Harmonics	<-30 dBc	<-40 dBc	<-30 dBc	<-40 dBc
Output level into 50 Ω	+7 ± 2 dBm	+7 ± 2 dBm	+12 ± 1 dBm	+7 ± 1 dBm
HCMOS Version				
Duty cycle	40/60			
Load	2 Gates			

*See Table

Model	Height	Current Steady State @ 25°C
XO5040	1.50	180 mA
XO5140	1.00	250 mA

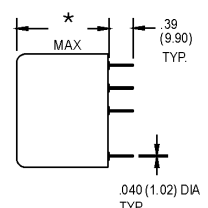
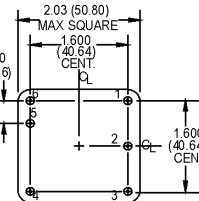
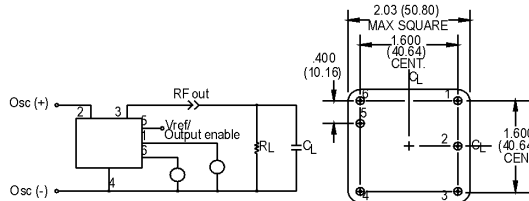
STD: PIN CONNECTIONS

1. FREQUENCY ADJUST
2. Vref/OUTPUT ENABLE
3. RF OUTPUT
4. CASE GROUND & SUPPLY RETURN
5. SUPPLY (+)

Pin numbers shown for ref. only.
Numbers are not marked on unit.

OPTION: PIN CONNECTIONS

1. FREQUENCY ADJUST (COARSE)
2. SUPPLY (+)
3. RF OUTPUT
4. CASE GROUND & SUPPLY RETURN
5. Vref/OUTPUT ENABLE
6. FREQUENCY ADJUST (FINE)

Pin numbers shown for ref. only.
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