OCXO-100M-50x50

Ultra-Low Phase Noise OCXO

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Features

- -170 dBc/Hz @ 10 kHz offset
- Allan deviation $< 5 \times 10^{-11}$ @ 1s
- ±200 ppb stability (0–70°C)
- Low g version available
- 12 V supply

Applications

- Radar applications
- Communication Equipment
- Synthesizers
- Instrumentation and Test Equipment

Electrical and Environmental Specifications

Parameter	Min	Typ	Max	Units
Frequency		100.000	–	MHz
Supply Voltage		12		V
Power Consumption (warmup)	–	6.0	–	W
Power Consumption (steady)	–	1.8	–	W
Reference voltage (12V version)	–	10.5	–	V
Output Level (sine)	–	+10	–	dBm

Frequency Stability

Parameter	Min	Typ	Max	Units
Frequency Stability at 10MHz				
vs. operating temperature range (0–70°C)	–	±200	–	ppb
Other temperature ranges are available please consult factory				
vs. supply voltage change ±5%	-	±20	-	ppb
vs. load change ±5%	-	±20	-	ppb
vs. aging/1 day	-	±10	-	ppb
vs. aging/1st year	-	±200	-	ppb
vs. aging/year	-	±100	-	ppb
Allan deviation	–	$< 5 \times 10^{-11}$	-	@ 1s
Warm-up (to ±50 ppb)	–	5	–	minutes
g-sensitivity(Optionally lower)	–	1	–	ppb/g
Phase noise(type A)				
@100 Hz	–	–125	–	dBc/Hz
@1 kHz	–	–155	–	dBc/Hz
@10 kHz	–	–165	–	dBc/Hz
@100 kHz	–	–170	–	dBc/Hz
Phase noise(type B)				
@100 Hz	–	–130	–	dBc/Hz
@1 kHz	–	–160	–	dBc/Hz
@10 kHz	–	–168	–	dBc/Hz
@100 kHz	–	–170	–	dBc/Hz

Supply Voltage (Vs)

Parameter	Min	Typ	Max	Units
Frequency		10.000	–	MHz
Supply Voltage		12		V
Power Consumption (warmup)	–	6.0	–	W
Power Consumption (steady)	–	1.8	–	W
Reference voltage (12V version)	–	10.5	–	V

RF Output

Parameter	Min	Typ	Max	Units
Output type		Sinewave	–	
Output Power(50 Ohm load)	–	10	–	dBm
Harmonics	–	-30	–	dBc
Spurious	–	-80	–	dBc

Frequency Tuning (EFC)

Parameter	Min	Typ	Max	Units
Tuning Range		±500		ppb
Linearity		15		%
Control Voltage Range	0		10	V
Input Impedance	–	100	–	kOhm

Absolute Maximum Ratings

Parameter	Min	Typ	Max	Units
Supply Voltage			15	V
Output Load			25	Ohm
Storage Temperature	-55		125	°C

Mechanical Pinout

- Pin 1: Control Voltage (V_c)
- Pin 2: Vref
- Pin 3: Vdd
- Pin 4: Output
- Pin 5: Ground / Case

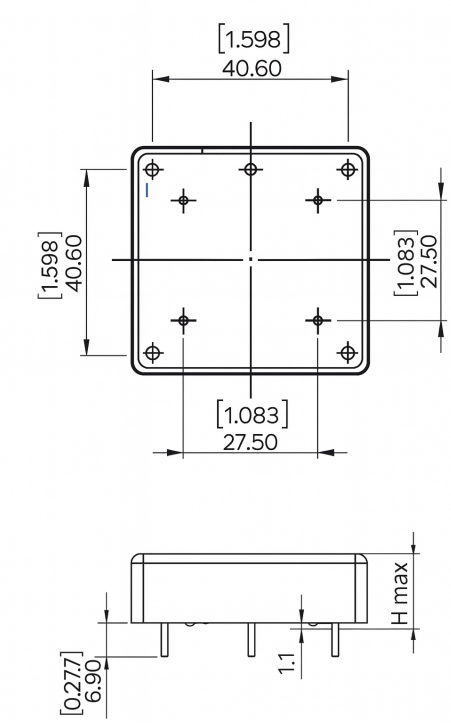

Figure 1: Mechanical Outline (dimensions in mm)

Ordering Information

Custom options available on request: supply voltage variants, alternative temperature ranges, output types.

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