

CFPO-2 H: Ultra Low Phase Noise & High Stability OCXO

ISSUE 5; 19 OCTOBER 2004

Description

- Ultra low phase noise and high stability OCXO

Package Outlines

- 50.8 x 50.8 x 38.0mm (50B)
- 67.0 x 60.0 x 40.0mm (67A)

Supply Options

- Standard: 12V (12)
- Optional: 15V (15), 24V (24)

Standard Frequency

- 5.0, 10.0MHz

Input Current @ 12V (Power Consumption)

- Warm up: $\leq 700\text{mA}$ ($\leq 8.5\text{W}$)
- @ 25°C: $\leq 250\text{mA}$ ($\leq 3.0\text{W}$) (calm air)

Warm Up Time @ 25°C (typical)

- $\pm 1 \times 10^{-8}$ after 15 minutes (calm air)

Retrace after 24 hours off @ 25°C

- $< \pm 5 \times 10^{-9}$ after 60 minutes

Output Compatibility

- Sine 5 dBm typical (50W)

Harmonic Distortion

- $\leq 30\text{dBc}$

Phase Noise @ 10.0MHz (sine output)

- 10Hz ≤ -120 dBc/Hz
- 100Hz ≤ -152 dBc/Hz
- 1kHz ≤ -160 dBc/Hz
- 10kHz ≤ -165 dBc/Hz

Environmental Specification (non-operating)

- Storage Temperature Range: -55 to 90°C
- Shock: 50g for 11ms
- Vibration: 10g for 10 to 500Hz

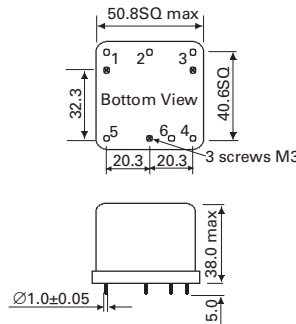
Marking Includes

- Model number (including options)
- Frequency
- Serial number
- Date code (Year/Week)

Weight/Mass

- $\leq 280\text{g}$ (50B); $\leq 350\text{g}$ (67A)

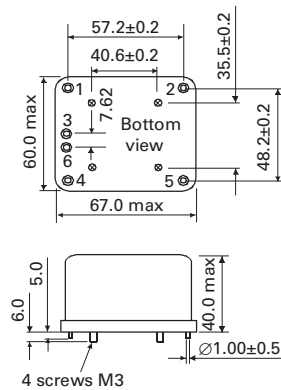
Outline in mm - Package 50B



Pin	Function
1.	Input frequency control
2.	Output reference voltage
3.	Output signal
4.	Mechanical GND and (-) supply
5.	Input supply (+)
6.	Oven alarm

All tolerances $\pm 0.2\text{mm}$

Outline in mm - Package 67A



Pin	Function
1.	Output signal
2.	Output reference voltage
3.	Mechanical GND and (-) supply
4.	Input frequency control
5.	Input supply (+)
6.	Oven alarm

All tolerances $\pm 0.2\text{mm}$

OCXOs

Electrical Specification

Operating Temperature Range	Stability within Temperature Range pk to pk	Long Term Stability @ 25°C after 30 days operation			Frequency Adjustment from 0V to V Ref(*) (pk-pk)	Frequency Stability Vs Supply Voltage Change (±5%) and Load Change (50Ω ±10%)	Model Number
		Per Day	Per Month	Per Year			
-10 to 70°C	$\leq 2 \times 10^{-10}$	$\leq 3 \times 10^{-11}$	$\leq 1 \times 10^{-9}$	$\leq 8 \times 10^{-9}$	$\geq 4 \times 10^{-7}$	$\leq 1 \times 10^{-10}$	CFPO-H1
-10 to 70°C	$\leq 2 \times 10^{-10}$	$\leq 7 \times 10^{-11}$	$\leq 2 \times 10^{-9}$	$\leq 1.5 \times 10^{-8}$	$\geq 6 \times 10^{-7}$	$\leq 1 \times 10^{-10}$	CFPO-H2
-10 to 70°C	$\leq 2 \times 10^{-10}$	$\leq 1.5 \times 10^{-10}$	$\leq 4 \times 10^{-9}$	$\leq 2.5 \times 10^{-8}$	$\geq 8 \times 10^{-7}$	$\leq 1 \times 10^{-10}$	CFPO-H3

Ordering Example CFPO-2 H3 50B-12 A 8.192MHz

Model _____

Package Outline (50B) (67A) _____

Supply Voltage (12) (15) (24) _____

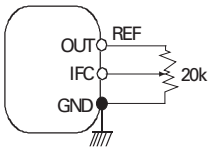
Oven Alarm Option (A) _____

Frequency (MHz) _____

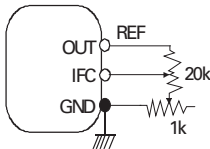
V ref. = Voltage Reference: +8.0±0.2V

External Frequency Adjustment

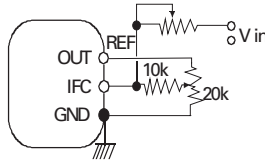
Manual freq. adjust.
Settability $< 1 \times 10^{-8}$



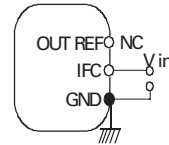
Fine manual freq. adjust.
Settability $< 1 \times 10^{-10}$



Freq. control voltage and manual adjust



Ext. freq. control voltage



All potentiometers must be 10 turns type with temperature coefficient 50ppm/°C

0CX05