

CFPO-11: SMD Micro High Stability OCXO

ISSUE 3; 1 SEPTEMBER 2001

Description

- Micro high stability surface mount OCXO

Package Outlines

- 25.0 x 22.0 x 14.0mm (25AS)
- 25.0 x 22.0 x 11.5mm (25LP)

Supply Options

- Standard: 5V (5)
- Option: 3.3V (3.3), 9V (9), 12V (12)

Standard Frequencies

- 10.0, 12.8, 13.0, 16.384, 20.0, 26.0MHz

Frequency Range

- 4.096 to 40.0MHz

Input Current @5V (Power Consumption)

- Warm up: $\leq 2.5W$
- In steady state @ +25°C $\leq 1.5W$ (calm air)

Warm Up Time @25°C (typical)

- $\leq \pm 1 \times 10^{-8}$ after 5 minutes @ 25°C

Retrace after 24 hours off

- $\leq \pm 1 \times 10^{-8}$ after 60 minutes

Output Compatibility (Standard)

- HCMOS

Frequency Stability Vs Supply Voltage Change ($\pm 5\%$) and Load Change (1 to 2 HCMOS)

- $\leq \pm 5 \times 10^{-9}$

Frequency Control Linearity

- $\leq 10\%$

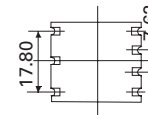
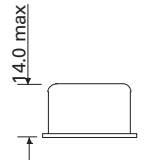
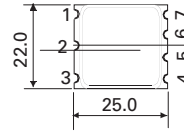
Environmental Specification (non-operating)

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

Marking Includes

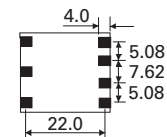
- Model number (including options)
- Frequency
- Serial number
- Date code (Year/Week)

Outline in mm - Package 25AS



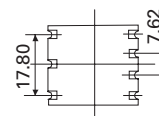
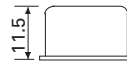
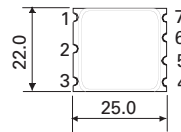
Pad connections	
1.	Frequency control
2.	Ref. voltage
3.	+Vs
4.	RF output
5.	Oven alarm
6.	N/C
7.	GND

Solder pad layout



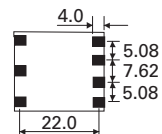
All tolerance $\pm 0.2mm$

Outline in mm - Package 25LP



Pad connections	
1.	Frequency control
2.	Ref. voltage
3.	+Vs
4.	RF output
5.	Oven alarm
6.	N/C
7.	GND

Solder pad layout



All tolerance $\pm 0.2mm$

Electrical Specification

Operating Temperature Range*	Stability within Temperature Range (pk-pk)	Long Term Stability @ 25°C after 30 days operation			Frequency Adjustment from 0 to V ref(**)	Phase Noise (Typical Figures)			Model Number
		Per Day	Per Month	Per Year		Output Frequency	@ 10Hz	@ 1kHz	
0 to 70°C	$\leq 2 \times 10^{-8}$	$\leq 5 \times 10^{-10}$	$\leq 1.5 \times 10^{-9}$	$\leq 5 \times 10^{-8}$	$\geq 6 \times 10^{-7}$	@ 10MHz	-115 dBc/Hz	-145 dBc/Hz	CFPO-11A1
0 to 70°C	$\leq 5 \times 10^{-8}$	$\leq 1 \times 10^{-9}$	$\leq 3 \times 10^{-8}$	$\leq 1.5 \times 10^{-7}$	$\geq 6 \times 10^{-7}$	@ 10MHz	-110 dBc/Hz	-145 dBc/Hz	CFPO-11A2
0 to 70°C	$\leq 2 \times 10^{-7}$	$\leq 3 \times 10^{-9}$	$\leq 8 \times 10^{-9}$	$\leq 5 \times 10^{-7}$	$\geq 2 \times 10^{-6}$	@ 26MHz	-105 dBc/Hz	-140 dBc/Hz	CFPO-11B1

Ordering Example CFPO-11 A2 25AS-15 10.0MHz

Model (CFPO-11 A1) (CFPO-11 A2) (CFPO-11 B1) _____

Package Outline (25AS) (25LP) _____

Supply Voltage (3.3) (5) (9) (12) _____

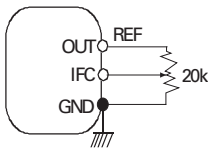
Frequency (MHz) _____

*Please note: Extended Operating Temperature Ranges may be available on request, please contact our sales office for further details.

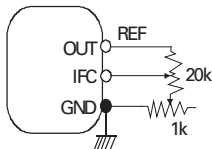
(**) V Ref = Voltage reference 4.0±0.2V with 5V and 12V supply
2.8±0.1V with 3.3V supply

External Frequency Adjustment

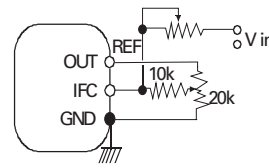
Manual freq. adjust.
Settability $< 1 \times 10^{-8}$



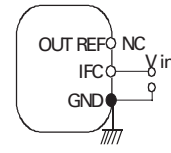
Fine manual freq. adjust.
Settability $< 1 \times 10^{-10}$



Freq. control voltage and manual adjust



Ext. freq. control voltage



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