MV80

High Stability Fast Warm-Up
Low Power Consumption OCXO
9.5-10.5 MHz

Revised 11/15/18

Your dedicated source for crystal oscillators and filters.

Features
- **Short Warm-Up Time**: Less than 60 Seconds
- High Stability vs. Temperature: up to ±2x10^{-8}
- Low Power Consumption: to 0.2 Watts
- HCMOS and Sinwave Output
- 5V & 12V

Applications
- SatCom
- Test equipment
- Network clock
- Base station

Specifications

Temperature Stability Availability			
Temperature Range	High	Higher	Comments
0 to +55^0 C	<±1x10^{-7}	<±2x10^{-8}	
-10 to +60^0 C	<±1x10^{-7}	<±2x10^{-8}	
-20 to +70^0 C	<±1x10^{-7}	<±3x10^{-8}	Contact factory for <±2x10^{-8}
-40 to +70^0 C	<±1x10^{-7}	<±5x10^{-8}	Contact factory for <±3x10^{-8}

Temperature ranges from -60^0 C to +85^0 C available. Comtact factory and see ordering designations at the end of this data sheet.

Long Term Stability (Yearly Aging) Availability			
Standard Frequencies	High	Higher	Comments
10.0 MHz	<±3x10^{-7}	<±1x10^{-7}	

See ordering designations at the end of this data sheet.

Short Term, Pulling & Pushing Stability			
Specification	Standard	Option	Comments
Short term stability per 1 sec.	<±3x10^{-11}	-	Allan deviation
Stability vs. Load (±5%)	<±3x10^{-9}	-	
Stability vs. power supply	<±3x10^{-9}	-	
Warm-up time to w/ in <±5x10^{-7}	<90 seconds	<60 seconds	@25^0 C

See ordering designations at the end of this data sheet.

Specifications-Continued

Phase Noise (dBc/Hz)			
Frequency Offset	Sinewave	HCMOS	Comments
1 Hz	< -90	< -90	
10 Hz	< -125	< -120	
100 Hz	< -140	< -135	
1 kHz	< -150	< -145	
10 kHz	< -155	< -150	

Contact factory for lower phase noise and see ordering designations at the end of this data sheet.

Output Parameters			
Output	Sinewave		HCMOS
Level	> 225 mV	"0"	< 0.5V
Load	50 Ohms ± 5%	"1"	> 5.0V
Rise/Fall Time	-		10K Ohms, 15 pF
Harmonics	> -30 dBc		-
Comtact factory for improved harmonics			-

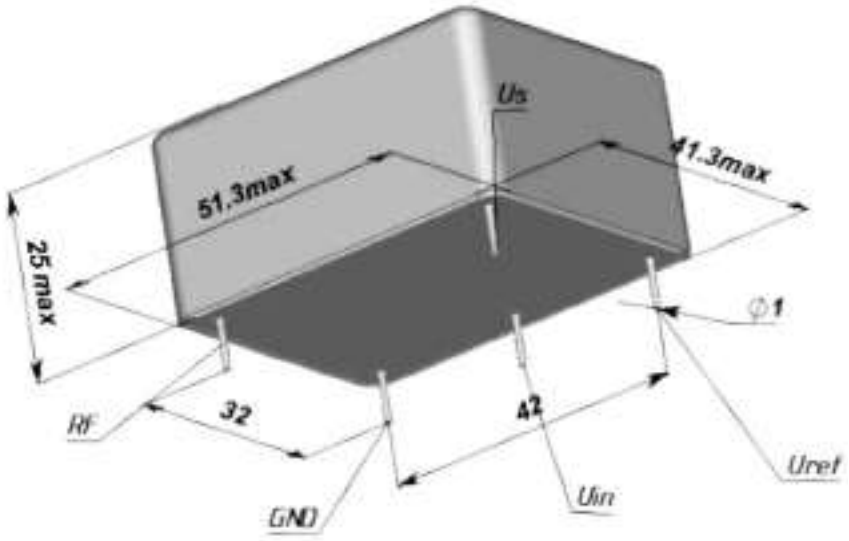
Power Supply & Voltage Control Parameters				
Specification	5V		12V	
	Sinewave	HCMOS	Sinewave	HCMOS
Steady state current @ 25^0 C	< 40 mA	< 50 mA	< 35 mA	< 40 mA
Steady state current @ -40^0 C	< 65 mA	< 75 mA	< 45 mA	< 50 mA
Surge Current @ Warm-Up @ 25^0 C	< 250 mA		< 150 mA	
Frequency Adjust range (10 MHz)		>±7.5x10^{-7}		
Frequency Adjust Voltage (Uin)	0 to +4.5V	0 to +4.5V	0 to +5V	0 to +5V
Reference Voltage (Uref)	+4.5V	+4.5V	+5V	+5V
Potentiometer		20 kOhm		

Environmental Parameters	
Specification	Conditions
Vibration Frequency	10-200 Hz
Vibration Acceleration	8 g
Shock Acceleration	100 g
Shock Duration	3±1 mS
Humidity	-
Storage Temperature	-55 to +80^0 C
RoHs	Option

Contact factory for extemded environmental conditions.

MV80

Outline Drawing



Pin	Value
Uref	Reference Voltage
Us	Power Supply
RF	RF Out
GND	Ground
Uin	Frequency Adjustment Voltage

Ordering Guide

Warm-up Time Within ±5x10^{-7} @ 25° C	
60 Seconds	60
90 Seconds	90

Output
Sinewave
HCMOS

Power Supply
12V
5V

MV80 - C 30 H - 60 - SIN - 12V - 10.0 MHz

Availability of certain stability vs. operating temperature range.		±x10^{-7}	±5x10^{-8}	±3x10^{-8}	±2x10^{-8}
		100	50	30	20
A	0 to +55^{0} C	A	A	A	A
B	-10 to +60^{0} C	A	A	A	A
C	-20 to +70^{0} C	A	A	A	C
D	-40 to +70^{0} C	A	A	C	C

A=Available, C=Contact factory, N=Not available.

Availability of certain aging values for certain frequencies.		Standard Frequencies 9.5-10.5 MHz
I	±3x10^{-7} /year	A
H	±2x10^{-7} /year	A
G	±1x10^{-7} /year	A

A=Available, C=Contact factory, N=Not available.

Additional Notes:
1) Contact factory for daily aging values. General rule: x10^{-x} /year = x10$^{-(x+2)}$ /day.
2) Advise RoHs requirement at Order.
3) Contact factory for non-standard temperature ranges.