MV341

Precision Low Phase Noise OCXO
10 MHz

Your dedicated source for crystal oscillators and filters.

Revised 11/15/18

Features
- Package Size: 50.8 x 50.8 x16.0 mm
- High Stability vs. Temperature: up to ±1x10^{-9}
- Long Term Stability: up to ±1x10^{-8} /year
- Short Term Stability, per 1 Sec (Allan deviation), upto 1.2x10^{-13}
- Ultra Low Phase Noise Close to Carrier
- Sinewave Output

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

Preliminary Specifications

Temperature Stability Availability			
Temperature Range	High	Higher	Comments
0 to +55^0 C	<±5x10^{-9}	<±1x10^{-9}	
-10 to +60^0 C	<±5x10^{-9}	<±1x10^{-9}	
-20 to +70^0 C	<±5x10^{-9}	<±2x10^{-9}	Contact factory for beter than <±2x10^{-9}
-40 to +70^0 C	<±5x10^{-9}	<±2x10^{-9}	Contact factory for beter than <±2x10^{-9}
-40 to +80^0 C	<±5x10^{-9}	<±3x10^{-9}	Contact factory for beter than <±3x10^{-9}

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 Frequency*	High	Higher	Comments
10 MHz	<±5x10^{-8}	<±2x10^{-8}	Contact factory for <±1x10^{-8}

* Contact factory for 5.0, 5.115 MHz, 10.230 MHz and other non-standard frequencies. See ordering designations at the end of this data sheet.

Short Term, Pulling & Pushing Stability						
Specification	Standard	Option	Option	Option	Option	Comments
Short term stability per 1 sec.	<±5x10^{-13}	<±3x10^{-13}	<±2x10^{-13}	<±1.5x10^{-13}	<±1.2x10^{-13}	ADEV
Stability vs. Load (±5%)	<±5x10^{-10}	-	-			
Stability vs. power supply (±5%)	<±5x10^{-10}	-	-			
Warm-up time to w/ in <±2x10^{-8}	<5 minutes	-	-			@25^0 C

* Only for LN & ULN options

Specifications-Continued

Phase Noise, 10 MHz, 12V, Sinewave (dBc/Hz)				
Frequency Offset	-	LN	ULN	Comments
0.01	-	-	<-37	"M" Option
0.1 Hz	< -80	< -85	< -88..-90	
1 Hz	< -113	< -116	**< -119..-120**	
10 Hz	< -143	< -146	< -145	
100 Hz	< -154	< -157	< -157	
1 kHz	< -160	< -160	< -160	
10 kHz	< -163	< -165	< -167	

Output Parameters	
Output	Sinewave
Level	> 400 mV
Load	50 Ohms ± 5%
Rise/Fall Time	-
Harmonics	> -30 dBc

See ordering designations at the end of this data sheet.

Power Supply & Voltage Control Parameters	
Supply Voltage	12V ±5%
Steady state current @ 25^0 C	< 250 mA
Peak warm-up current @ -20^0 C	< 600 mA
Frequency Adjust range (10 MHz)	$>\pm 3x10^{-7}$
Frequency Adjust Voltage (Uin)	0 to +5V
Reference Voltage (Uref)	+5V

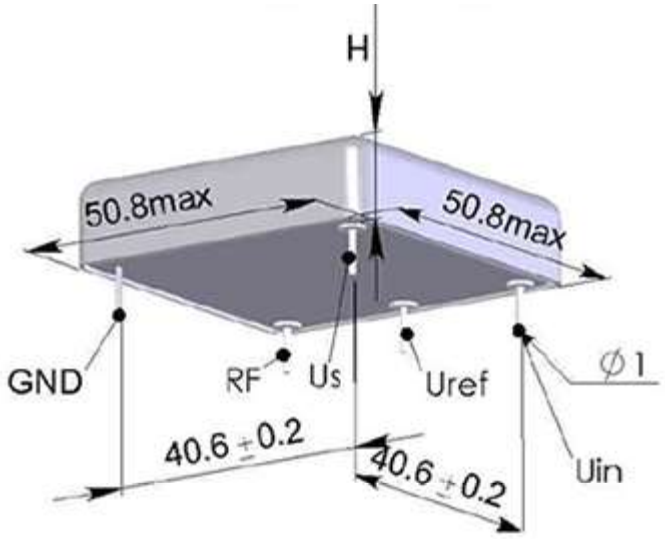
See ordering designations at the end of this data sheet.

Environmental Parameters		
Specification	Comment	Conditions
Vibration Frequency		10-500 Hz
Vibration Acceleration		5 g
Shock Acceleration		75 g
Shock Duration		3±1 mS
Humidity		98%
Storage Temperature		-55 to $+85^0$ C
G-Sensitivity	"M" Option	<1E-9
RoHs		Option

Contact factory for extemded environmental conditions.

MV341

Outline Drawing



H=16 mm

Ordering Guide

Short Term Stability /1 Sec, 10 MHz				
STD	LN & ULN	LN & ULN	ULN Only	ULN Only
5E-13	3E-13	2E-13	1.5E-13	1.2E-13

Package	Size
Z16	50.8x50.8x16 mm

MV341 - C 2 D - 10.0MHz - ULN - 5E-13

Availability of certain stability vs. operating temperature range.		±5x10^{-9}	±3x10^{-9}	±2x10^{-9}	±1x10^{-9}
		5	3	2	1
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	A	C
EX	-40 to +80^0 C	A	A	C	C

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

Availability of certain aging values for certain frequencies.		Standard Frequency*
		10.0 MHz
F	±5x10^{-8} /year	A
E	±3x10^{-8} /year	A
D	±2x10^{-8} /year	A
C	±1x10^{-8} /year	C

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

Phase Noise (dBc/Hz),10 MHz, Sinewave			
Offset	-	LN	ULN
0.01 Hz	-	-	**<-37***
0.1 Hz	<-80	<-85	**<-89..-90**
1 Hz	<-113	<-116	**<-119..-120**
10 Hz	<-143	<-144	<-145
100 Hz	<-154	<-157	<-157
1 kHz	<-160	<-160	<-160
10 kHz	<-163	<-165	<-167

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.

*** Option "M": G-Sensitivity <1E-9, Phase Noise <-37 @ 0.01 Hz**
Identify in RFQ form and/or Contact factory.