DOUBLE OVEN ULTRA PRECISION OCXO MV360M

Features:

- *High stability vs. temperature: up to ±3x10^{-11}*
- *Standard frequency: 10.0 MHz*
- *Standard package: 50.8x50.8x19 mm*
- *High long-term stability: up to ±1x10^{-8}/year*
- *Power supply: 5 V and 12 V*
- *Analog or Digital frequency control*
- *Applications: 5G, Telecommunication, Test & Measurement*

Supply voltage
5 V
12 V

Type of frequency control	
-	Analog
D	Digital I^{2}C
SPI	Digital SPI

Output
SIN
LVCMOS

ORDERING GUIDE: MV360M – C 003 D – 12V – 10.0MHz – D – LVCMOS

Availability of certain stability vs. operating temperature range		±1x10^{-10}	±5x10^{-11}	±3x10^{-11}
		01	005	003
A	0–+55ºC	A	A	A
B	-10–+60ºC	A	A	A
C	-20–+70ºC	A	A	A
D	-40–+70ºC	A	A	A
EU	-40–+75ºC	A	A	A
EX*	-40–+85ºC	A	A	A

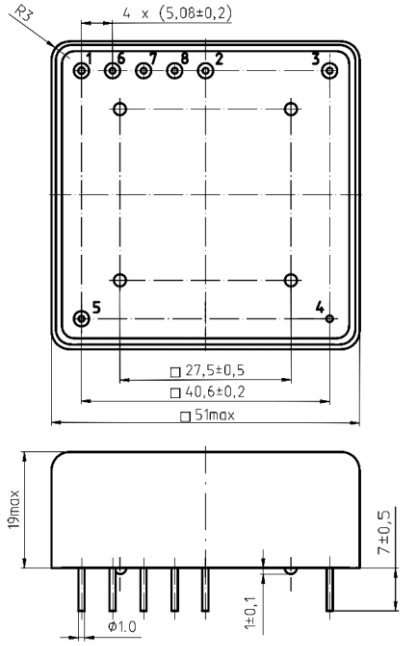
A – available
* for 5V only

Availability of certain aging values for certain frequencies	
F	±5x10^{-8}/year
E	±3x10^{-8}/year
D	±2x10^{-8}/year
C	±1x10^{-8}/year

Phase noise, dBc/Hz	SIN		LVCMOS
	-, D	SPI	
1 Hz	<-100	<-95	<-95
10 Hz	<-130	<-125	<-125
100 Hz	<-150	<-150	<-140
1000 Hz	<-150	<-150	<-145
10000 Hz	<-155	<-155	<-150

Short term stability (Allan deviation) per 1 sec	<2x10^{-12}
Option for SPI	<5x10^{-12}*
Option for analog and D(I^{2}C)	<1x10^{-12}**

* is allowed not to specify when ordering
** specified only if the option is required



Frequency stability vs. load changes (±5%)	<±1x10^{-11}	
Frequency stability vs. power supply changes (±5%)	<±1x10^{-11}	
Warm-up time within accuracy of <±5x10^{-8}@ 25ºC	<15 min.	
Digital frequency control by I^{2}C protocol		
Frequency pulling range	≥±2,5x10^{-7}	
Power supply	5V±5%	12V±5%
U_{DAC}	4,1 V	5 V
DAC type	LTC2606-1	
Chip address	0010000	
Digital frequency control by SPI protocol		
DAC type	MAX5719	
Analog frequency control		
Frequency pulling range	≥±2,5x10^{-7}	
Power supply	5V±5%	12V±5%
with external control voltage range	0–+4,1	0–+5
Reference voltage output	+4,1 V	+5 V

Steady state current consumption @ +25ºC	<600 mA	<300 mA
Peak current consumption during warm-up	<2 A	<1 A

Pin	Analog	Digital	
		D	SPI
1	Control voltage Input	SDA*	DIN*
2	Reference voltage Output	SCL*	SCLK*
3	RF output	RF output	RF output
4	Ground (case)	Ground (case)	Ground (case)
5	Power supply	Power supply	Power supply
6	Ground for control voltage Input	Not used	Not used
7	Not used	Not used	$\overline{CS}$*
8	Not used	Not used	$\overline{LDAC}$*

* inputs connected to U_{DAC} via 10 kOhm

Output	SIN	LVCMOS
Level	>300 mV RMS	«1» >2.4V «0» <0.4V
Load	50 Ohm±5%	10 kOhm/15 pF
Harmonic suppression	>30 dBc	-

Vibrations:	
Frequency range	10-200 Hz
Acceleration	5 g
Shock:	75 g/ 3±1 ms
Humidity @ 25 ºC	98%
Storage temperature range	-55–+85ºC

Additional notes:

For non-standard operating temperature ranges please use the following two letters designations (first letter for the lower limit, second letter for the upper limit), ºC:

E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	W	X
-40	-30	-20	-10	0	+10	+30	+40	+45	+50	+55	+60	+65	+70	+75	+80	+85

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