

ULTRA HIGH PERFORMANCE OCXO WITH LOW G-SENSITIVITY_MV272M

Features:

- Standard frequencies: 5.0 Mhz and 10.0 MHz
- Ultra low phase noise
- High stability vs. temperature: up to $\pm 1 \times 10^{-9}$
- High long term stability: up to $\pm 1 \times 10^{-8}$ /year
- Oscillation ON/OFF function
- Low G-sensitivity (1×10^{-9} – typical)
- SMD package

ORDERING GUIDE: MV272M - C 3 D - ULN-10.0 MHz-5E-13

Availability of certain stability vs. operating temperature range, still air		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$
		5	3	2	1
A	0...+55°C	A	A	A	A
B	-10...+60°C	A	A	A	A
C	-20...+70°C	A	A	A	C
EX	-40...+85°C	A	A	C	C

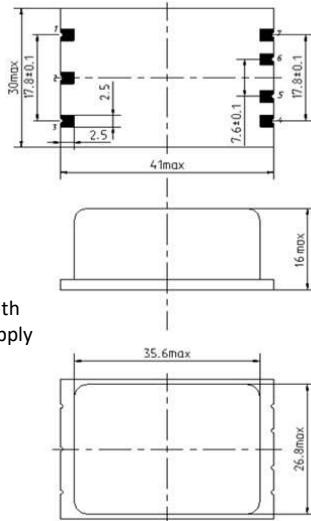
A – available; C – consult factory.

For other temperature ranges please consult factory.

Availability of certain aging values for certain frequencies		
F	$\pm 5 \times 10^{-8}$ /year	A
E	$\pm 3 \times 10^{-8}$ /year	A
D	$\pm 2 \times 10^{-8}$ /year	A
C	$\pm 1 \times 10^{-8}$ /year	C

Pin Designation

- 1 GND
- 2 NC
- 3 RF
- 4 Us
- 5 ON/OFF*
- 6 6 U in
- 7 7U ref



*- On/Off function:

Oscillator will be ON with Voltage >2.4V up to supply Voltage on pin 5.

Phase noise, dBc/Hz	10.0 MHz			5.0 MHz	
	LN	ULN	IULN	ULN	IULN
1 Hz	<-112	<-115	≤-118...-120	<-115	<-120
10 Hz	<-142	≤-144	≤-145	≤-140	≤-145
100 Hz	<-154	<-157	<-159	<-157	<-157
1000 Hz	<-160	<-160	<-165	<-161	<-161
10000 Hz	<-160	<-160	<-168	<-162	<-162

Short term stability (Allan deviation) per 1 sec	
10.0 MHz	5.0 MHz
< 1×10^{-12} (1E-12)	< 2×10^{-12} (2E-12)
< 5×10^{-13} (5E-13)	< 1×10^{-12} (1E-12)
< 4×10^{-13} (4E-13)**	< 7×10^{-13} (7E-13)***
	< 5×10^{-13} (7E-13)***

** Only for phase noise ULN option.

*** Only for phase noise IULN option. Please consult factory for option 5E-13.

Not for reflow soldering

Vibrations:	
Frequency range	10-500 Hz
Acceleration	3 g
Shock:	
	75 g/ 3±1 ms
Humidity @ 25 °C	
	98%
Storage temperature range	
	-55...85°C

Frequency stability vs. load changes (±5%)	< $\pm 5 \times 10^{-10}$
Frequency stability vs. power supply changes (±5%)	< $\pm 5 \times 10^{-10}$
Warm-up time within accuracy of $\pm 2 \times 10^{-8}$ @ 25°C	<5 min
Power supply (Us)	12V±5%
Steady state current consumption @ +25°C	<200 mA
Peak current consumption during warm-up **	<500 mA
Frequency pulling range	> $\pm 3.0 \times 10^{-7}$
Control voltage range (Uin)	0...5 V
Reference voltage (Uref)	+5 V
Output	SIN
Level	>350 mV
Load	50 Ohm±5%
Harmonics	>30 dB

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), °C:

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



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Due to continuous development and improvement Morion reserves the right to modify design or specifications of its products without prior notice.

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