

# HIGH STABILITY LOW POWER CONSUMPTION OCXO MV83

## Features:

- High frequency stability – up to  $\pm 7.5 \times 10^{-9}$
- Low power consumption
- Low aging
- Low phase noise
- Wide choice of packages
- Frequency range 4.6-20.0 MHz
- Available as RoHS

**ORDERING GUIDE: MV83 - C 10 F - Z - 10.0 MHz - X**

Package type	
X	67x60x30 mm
Z	50.8x50.8x25.4 mm
Y	51.3x41.3x25 mm

**Multiplied Frequency**  
No multiplication by default

Availability of certain stability vs. operating temperature range		$\pm 1 \times 10^{-7}$	$\pm 5 \times 10^{-8}$	$\pm 3 \times 10^{-8}$	$\pm 2 \times 10^{-8}$	$\pm 1 \times 10^{-8}$	$\pm 7.5 \times 10^{-9}$
		100	50	30	20	10	7
A	0...+55 °C	A	A	A	A	A	A
B	-10...+60 °C	A	A	A	A	A	C
C	-20...+70 °C	A	A	A	A	A	NA
D	-40...+70 °C	A	A	A	A	C	NA
Two current consumption options are available							
85 mA – steady state, 600 mA – peak current consumption during warm-up		A	A	A	A	A	A
35 mA – steady state, 400 mA – peak current consumption during warm-up		A	A	A	C	NA	NA

For other temperature ranges see designation at the end of Data Sheet

Availability of certain aging values for certain frequencies		Standard frequencies			
		5.0 MHz	6.4 MHz	8.192 MHz	10.0 MHz
		Multiplied frequencies (option X)			
		10.0 MHz	12.8 MHz	16.384 MHz	20.0 MHz
H	$\pm 2 \times 10^{-7}$ /year	A	A	A	A
G	$\pm 1 \times 10^{-7}$ /year	A	A	A	A
F	$\pm 5 \times 10^{-8}$ /year	A	A	A	C
E	$\pm 3 \times 10^{-8}$ /year	C	C	NA	NA

A – available, NA – not available, C – consult factory

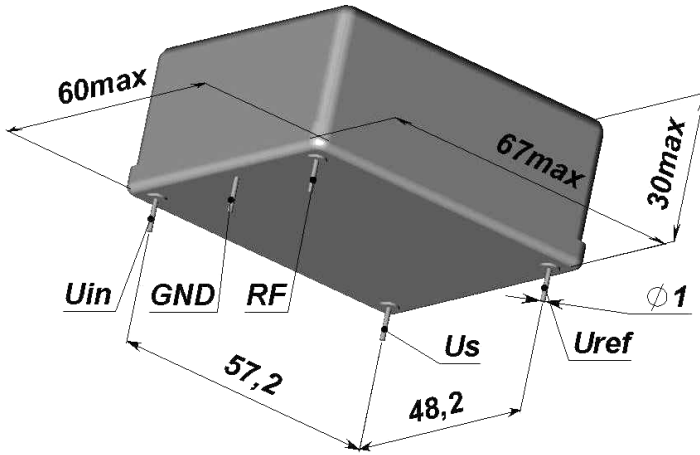
Short term stability (Allan deviation) per 1 sec. (for 5 MHz)	$< 5 \times 10^{-12}$
Frequency stability vs. load changes	$< \pm 2 \times 10^{-9}$
Frequency stability vs. power supply changes	$< \pm 2 \times 10^{-9}$
Power supply	12V $\pm$ 5%
Warm-up time within $< \pm 5 \times 10^{-8}$ @ 25 °C	<7min
Frequency pulling range	$> \pm 3 \times 10^{-7}$
with external voltage range	0...+5V
with external potentiometer	20 kOhm
Reference voltage output	+5V
Slope	Positive

Output	SIN	SIN (option X)
Level	>225 mV (0dBm)	
Load	50 Ohm $\pm$ 5%	
Harmonic, subharmonic suppression	>30dB	
Phase noise, typical (for 5 MHz/10 MHz) @ 1 Hz	-100 dBc/Hz	-95 dBc/Hz
10 Hz	-130 dBc/Hz	-123 dBc/Hz
100 Hz	-150 dBc/Hz	-140 dBc/Hz
1000 Hz	-155 dBc/Hz	-145 dBc/Hz
10000 Hz	-158 dBc/Hz	-150 dBc/Hz

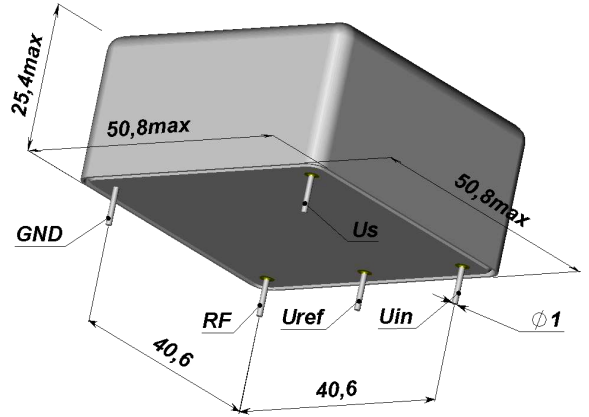
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## Package drawings:

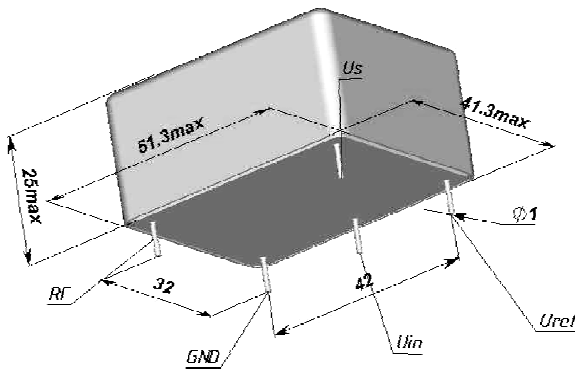
Package type X



Package type Z



Package type Y



## Mechanical characteristics:

Storage temperature range	-55...+85 °C
Vibrations	10-500 Hz, 10 g
Shock	100g

## Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily aging per day to aging per year is as following:  $\pm 2 \times 10^{-7}/\text{year} - \pm 2 \times 10^{-9}/\text{day}$ ;  $\pm 1 \times 10^{-7}/\text{year} - \pm 1 \times 10^{-9}/\text{day}$ ;  $\pm 5 \times 10^{-8}/\text{year} - \pm 5 \times 10^{-10}/\text{day}$ ;  $\pm 3 \times 10^{-8}/\text{year} - \pm 3 \times 10^{-10}/\text{day}$ .
- Please mention RoHS requirement (if any) while requesting for quote or while placing PO.
- 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