

# PRECISION OCXO IN SMD PACKAGE MV295

## Features:

- High stability vs. temperature: up to  $\pm 5 \times 10^{-9}$
- Standard 25.4x22x12.5 (10.0)mm package
- Oven alarm function
- 3.3V, 5V and 12V power supply
- Available as RoHS
- Frequency range: 10.0 – 40.0 MHz

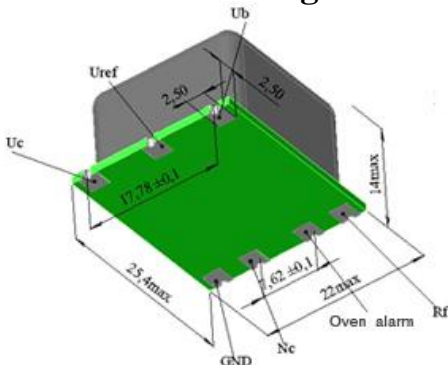
<b>Power supply</b>	<b>Output</b>	<b>Package type</b>	
12V	SIN	24.5x22x12.5 mm	C12.5
5V	HCMOS	25.4x22x10 mm	C10
3.3V			

## ORDERING GUIDE: MV295 – C 5 F – 12V – SIN – C12.5 – LN – 10.0 MHz

Availability of certain stability vs. operating temperature range (for 10 MHz, 12 V)		Stability vs. temperature			
		$\pm 5 \times 10^{-8}$	$\pm 2 \times 10^{-8}$	$\pm 1 \times 10^{-8}$	$\pm 5 \times 10^{-9}$
A	0...+55 °C	A	A	A	A
B	-10...+60 °C	A	A	A	C
C	-20...+70 °C	A	A	A	C
D	-40...+70 °C	A	A	C	C
EX	-40...+85 °C	A	A	NA	NA

A – available, NA – not available, C – consult factory  
For other temperature ranges see designation at the end of Data Sheet.

## Package drawings:



### Outputs designations

- Ub - Power supply
- Uref - Reference Voltage output
- Uc - Control Voltage input
- Rf - Rf output
- Oven alarm
- NC
- GND - Ground

Availability of certain aging values for certain frequencies		Standard frequencies					
		10.0 MHz	12.8 MHz	15.36 MHz	16.384 MHz	20.0 MHz	30.72 MHz
H	$\pm 2 \times 10^{-7}$ /year	A	A	A	A	A	A
G	$\pm 1 \times 10^{-7}$ /year	A	A	A	A	C	C
F	$\pm 5 \times 10^{-8}$ /year	A	A	A	C	NA	NA
E	$\pm 2 \times 10^{-8}$ /year	C	C	NA	NA	NA	NA

Phase noise, dBc/Hz, for 10MHz		LN *	ULN*
		For SIN	
1 Hz	<-90	<-90	<-100
10 Hz	<-120	<-120	<-130
100 Hz	<-135	<-140	<-145
1000 Hz	<-145	<-150	<-150
10000 Hz	<-150	<-155	<-155

<b>Vibrations:</b>	
Frequency range	10-200 Hz
Acceleration	5 g

<b>Shock:</b>	
Acceleration	75 g
Duration	3±1 ms

<b>Humidity @ 25 °C</b>	98%
<b>Storage temperature range</b>	-55...+85 °C

\* consult factory

Frequency stability vs. load changes (±5%)	<1x10 <sup>-11</sup>
Frequency stability vs. power supply changes (±5%)	<±3x10 <sup>-9</sup>
Warm-up time within accuracy of <±1x10 <sup>-7</sup> @ 25°C	<3 min

Power supply (Us)	12V±5%	5V±5%	3.3V±5%
Steady state current consumption @ +25°C	<85mA	<250 mA	<300 mA
Peak current consumption during warm-up (for "D" temp. range)	<220 mA	<500 mA	<750 mA
Frequency pulling range (for 10 MHz)	>±5.0x10 <sup>-7</sup>		
Control voltage range (Uin)	0...5 V	0...4.5V	0...2.8V
Reference voltage (Uref)	+5 V	+4.5 V	+2.8 V

<b>Output</b>	<b>HCMOS</b>	
Level	12V	>4.5 / <0.5V
	5V	>4.0 / <0.5V
	3.3V	>2.4 / <0.3V
Load	10kOhm/15pF	
Rise/Fall time	<6 ns	
Harmonics	-	

## Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily to aging per year is as following:  $\pm 1 \times 10^{-7}$ /year –  $\pm 1 \times 10^{-9}$ /day;  $\pm 5 \times 10^{-8}$ /year –  $\pm 5 \times 10^{-10}$ /day;  $\pm 3 \times 10^{-8}$ /year –  $\pm 3 \times 10^{-10}$ /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