

# HIGH STABILITY WIDE TEMPERATURE RANGE SMALL SIZE TCXO (VCTCXO) MV392

## Preliminary information

### Features:

- Ultra-wide temperature range from  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Frequency range: 8.0 – 52.0 MHz
- Standard frequencies: 10.0; 12.8; 16.0; 19.2; 20.0; 25.6; 30.72; 40.0 MHz
- SMD miniature package

Package size, mm	
7.0 x 5.0 x 2.0	75
7.0 x 5.0 x 1.9	75/1
5.0 x 3.2 x 1.7	53

Power supply	
2.8V	2.8
3V	3
3.3V	3.3

## ORDERING GUIDE: MV392 – TCXO – EX500 – 20.0MHz – Sin – 3.3 – 75 – C2

	VCTCXO	TCXO
Frequency pulling range	$>\pm 5.0 \times 10^{-6}$	-
Setting accuracy	$\leq \pm 1.0 \times 10^{-6}$	

Output type	Clipped Sin	HCMOS
Consumption	$< 5 \text{ mA}$	$< 7 \text{ mA}$
Level	$> 0.8 \text{ V}$ (ampl. value)	$U_H > 0.8 U_s$ $U_L < 0.2 U_s$
Load	10 kOhm 10 pF	- 10 pF

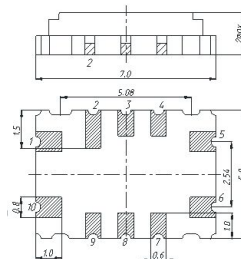
	Availability of certain stability vs. operating temperature range for 20 MHz	$\pm 2 \times 10^{-6}$	$\pm 1 \times 10^{-6}$	$\pm 0.5 \times 10^{-6}$	$\pm 0.28 \times 10^{-6}$
		2000	1000	500	280
GT	$-20 \dots +70^{\circ}\text{C}$	A	A	A	A*
EX	$-40 \dots +85^{\circ}\text{C}$	A	A	A*	A*
BX	$-55 \dots +85^{\circ}\text{C}$	A	A*	C	C
EZ	$-40 \dots +125^{\circ}\text{C}$	A	C	C	C
BZ	$-55 \dots +125^{\circ}\text{C}$	A	C	C	C

A – available, NA – not available, C – consult factory  
\* not available for VC-TCXO

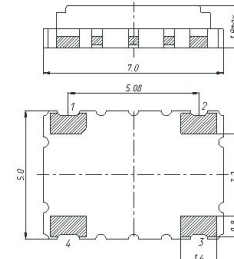
Power supply $U_s, \text{V}$	Control voltage $U_{in}, \text{V}$		
	Value for which $f=f_{nom}$	Range	Designation
$2.8 \pm 5\%$	1.50	0.5-2.5	A1
	1.65	0.65-2.65	A2
$3.0 \pm 5\%$	1.5	0.5-2.5	B1
	1.65	0.65-2.65	B2
$3.3 \pm 5\%$	1.5	0.5-2.5	C1
	1.65	0.65-2.65	C2

Frequency vs. supply voltage changes $\pm 5\%$	$\pm 0.4 \times 10^{-6}$	
Frequency stability vs. load changes $\pm 5\%$	$\pm 0.2 \times 10^{-6}$	
Aging/year	$\pm 1 \times 10^{-6}$	
Power spectral density of phase noise at offset, for 20 MHz, dB/Hz	100 Hz	-113
	1 kHz	-133
	10 kHz	-146

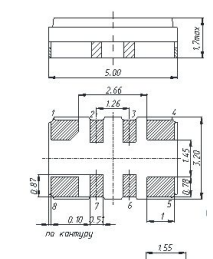
Option 75



Option 75/1



Option 53



Pinout:				
Contact			TCXO	VCTCXO
75	75/1	53		
#1	#1	#1	Not in use	$U_{in}$
#2, 3, 4	-	#2, 3	Not in use	
#5	#2	#4	GND	
#6	#3	#5	RF	
#7, 8	-	#6	Not in use	
#9	-	#7	Not in use	
#10	#4	#8	$U_s$	

### 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),  $^{\circ}\text{C}$ :

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	W	X	Z
-60	-55	-50	-45	-40	-30	-20	-10	0	+10	+30	+40	+45	+50	+55	+60	+65	+70	+75	+80	+85	+125

 MORION, Inc.

13a, KIMa Ave., St.Petersburg, 199155, RUSSIA. <http://www.morion.com.ru>  
Tel:+7-812-350-9243, 350-7572. Fax:+7-812-332-5025. e-mail: sale@morion.com.ru

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

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