High Frequency HCMOS 11.4 x 9.6 x 3.0mm SMD

- **Industry-standard 11.4 x 9.6 x 3.0mm SMD package**
- **Frequency range: 27.0MHz to 200.0MHz**
- **Supply voltage +3.0V or +3.3VDC**
- **Frequency stability from ±1ppm over -30 to +75°C**

RoHS

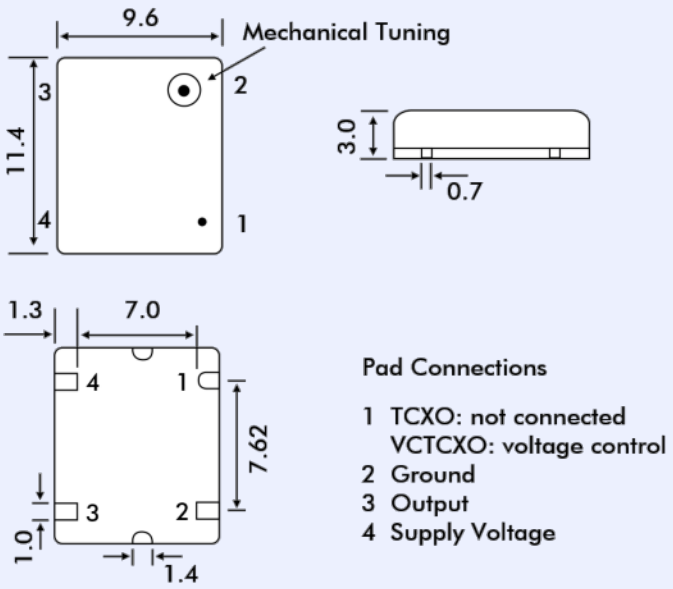
DESCRIPTION

MV43T series TCXOs are packaged in an industry-standard pad SMD package. With squarewave (CMOS) output, tolerances are available from ±1.0ppm over -30° to +75°C. The part has a 0.01µF decoupling capacitor built in.

SPECIFICATION

Product Series Code	
TCXO:	MV43T
Voltage-controlled TCXO (VCTCXO):	VMV43T
Frequency Range:	27.0MHz to 200.0MHz
Output Waveform:	Square wave, HCMOS
Initial Calibration Tolerance	
Models with mechanical trimmer:	<±1ppm at 25°±2°C
Models without mech. trimmer:	<±2ppm at 25°±2°C
Standard Frequencies:	30.0, 32.768, 38.880, 40.0, 50.0, 54.0, 64.0, 65.536, 77.76, 80.0, 100.0, 155.52, and 160.0MHz *(Partial list)*
Operating Temperature Range:	*See table*
Frequency Stability	
vs. Ageing:	±1.0 ppm max. first year
vs. Voltage Change:	±0.3 ppm max. ±5% change
vs. Load Change:	±0.3 ppm max. ±10% change
vs. Reflow:	±1ppm max. for one reflow (*Measured after 24 hours*)
Supply Voltage:	+ 3.0V or +3.3 Volts
Output Logic Levels	
Logic High '1':	90% V_{DD} minimum
Logic Low '0':	10% V_{DD} maximum
Current Consumption:	40mA max. *Frequency dependant*
Rise/Fall Times:	1.2ns typical
Duty Cycle:	50±5%
Start-up Time:	5ms typical, 10ms max.
Output Load:	15pF
Storage Temperature:	-50° to +125°C
RoHS Status:	RoHS Compliant and lead free

MV44T - OUTLINE AND DIMENSIONS



VMV43T VOLTAGE CONTROL SPECIFICATION

Control Voltage:	Standard = +1.5±1.0 Volts
Frequency Deviation:	±6.0 ppm min.
Slope Polarity:	Positive *(increase of control voltage increases output frequency.)*
Input Impedance:	2MΩ min.
Modulation Bandwidth:	25kHz min.
Linearity:	±10% max.

FREQUENCY STABILITY vs TEMPERATURE

Frequency Stability (ppm)		±0.5	±1.0	±1.5	±2.0	±2.5
Temperature Range (°C)	0° ~ +50°C	✓	✓	✓	✓	✓
	-10° ~ +60°C	ASK	✓	✓	✓	✓
	-20° ~ +70°C	x	✓	✓	✓	✓
	-30° ~ +75°C	x	✓	✓	✓	✓
	-30° ~ +80°C	x	✓	✓	✓	✓
	-40° ~ +85°C	x	ASK	✓	✓	✓

✓ = available, x = not available, ASK = call Technical Sales

SSB PHASE NOISE at 25°C

Offset:	10Hz	100Hz	1kHz	10kHz	100kHz
Fr. 77.760MHz	-80dBc/Hz	-110dBc/Hz	-135dBc/Hz	-130dBc/Hz	-132dBc/Hz
Fr. 155.52MHz	-80dBc/Hz	-110dBc/Hz	-125dBc/Hz	-120dBc/Hz	-125dBc/Hz

PART NUMBERING PROCEDURE

Example: **_MV43T33-40.000-2.5/-30+75**

Series Description
TCXO = MV43T
VCTCXO = VMV43T
Supply Voltage
3 = 3.0VDC
33 = 3.3VDC
Frequency (MHz)
Stability over OTR (±ppm)
Operating Temperature Range (OTR) (°C)
(*Lower and upper limits*)

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