

## CMOS TCXO 7.0 x 5.0 x 2.3mm SMD

## 40MHz to 156MHz

- Miniature 7.0 x 5.0 x 2.3mm SMD package
- Frequency range: 40MHz to 156.0MHz
- Supply voltage 2.5, 3.0, 3.3 or 5.0 Volts
- Frequency stability from  $\pm 0.5$ ppm
- RoHS compliant



### DESCRIPTION

ML572T series TCXOs are packaged in a miniature 4 pad ceramic SMD package. With squarewave (CMOS) output, tolerances are available from  $\pm 0.5$ ppm. The part has a 0.01 $\mu$ F decoupling capacitor built in.

### SPECIFICATION

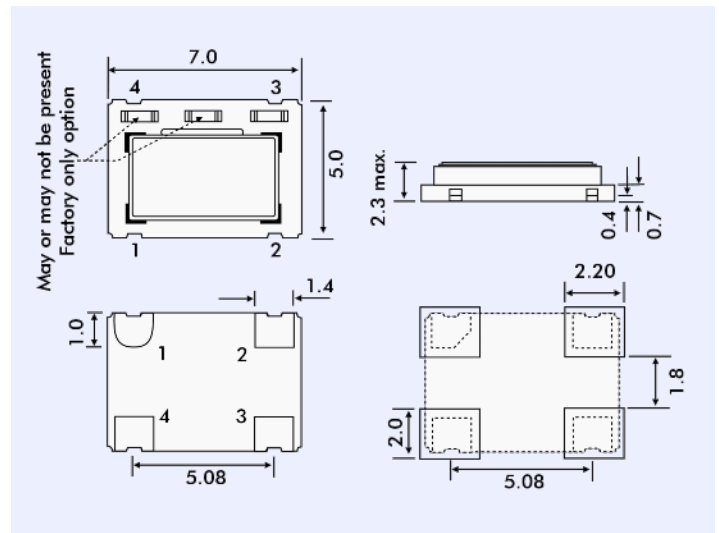
Product Series Code:	ML572T
Frequency Range:	40.0MHz to 156. MHz
Output Waveform:	Square wave, HCMOS
Initial Calibration Tolerance:	$< \pm 2$ ppm at 25 $\pm 2$ °C
Operating Temperature Range:	See table
Frequency Stability	
vs. Ageing:	$\pm 1.0$ ppm max. first year
vs. Voltage Change:	$\pm 0.3$ ppm max. $\pm 5\%$ change
vs. Load Change:	$\pm 0.3$ ppm max. $\pm 10\%$ change
vs. Reflow:	$\pm 1$ ppm max. for one reflow (Measured after 24 hours)
Supply Voltage:	+2.5, 3.0, 3.3 or +5.0Volts
Output Logic Levels	
Logic High '1':	90% V <sub>DD</sub> minimum
Logic Low '0':	10% V <sub>DD</sub> maximum
Rise/Fall Times:	10ns maximum
Duty Cycle:	50 $\pm 10\%$ standard, 50 $\pm 5\%$ available
Start-up Time:	5ms typical, 10ms max.
Current Consumption	
40.000MHz:	10mA maximum
77.760MHz:	32mA maximum
155.52MHz:	50mA maximum
Output Load:	15pF
Storage Temperature:	-50° to +100°C
RoHS Status:	RoHS Compliant and lead free

### FREQUENCY STABILITY vs TEMPERATURE

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

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

### ML572T - OUTLINE AND DIMENSIONS



### VML572T VOLTAGE CONTROL SPECIFICATION

Control Voltage:	Standard = +1.5 $\pm 1.0$ Volts for all input voltages. (Contact technical sales if +2.5 $\pm 2.0$ Volts is required.)
Frequency Deviation:	$\pm 5.0$ ppm min.
Slope Polarity:	Positive (increase of control voltage increases output frequency.)
Input Impedance:	50M $\Omega$ min.
Modulation Bandwidth:	20.0kHz min.
Linearity:	10% max.

### SSB PHASE NOISE (supply = 3.3V, Load 15pF at 25°C)

Offset:	10Hz	100Hz	1kHz	10kHz	100kHz
40.000MHz	-85dBc/Hz	-102dBc/Hz	-121dBc/Hz	-130dBc/Hz	-132dBc/Hz
77.760MHz	-74dBc/Hz	-99dBc/Hz	-98dBc/Hz	-95dBc/Hz	-90dBc/Hz
155.520MHz	-68dBc/Hz	-96dBc/Hz	-100dBc/Hz	-99dBc/Hz	-90dBc/Hz

### PART NUMBERING

Example: **ML572T33-10.000-2.5/-30+75**

Series Description

TCXO = ML572T

VCTCXO = VML572T

Supply Voltage

25 = 2.5VDC

3 = 3.0VDC

33 = 3.3 VDC

5 = 5.0 VDC

Frequency (MHz)

Stability over OTR ( $\pm$ ppm)

Operating Temperature Range (OTR) (°C)

(Lower and upper limits)