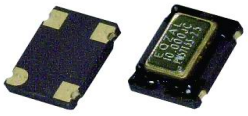
MB57T Series TCXO & VCTCXO

HCMOS 7 x 5 x 2.5mm SMD

- **Miniature 7 x 5 x 2.5mm SMD package**
- **Frequency range: 1.25MHz to 156.0MHz**
- **Supply voltage 3.3 Volts**
- **Frequency stability ±2.5ppm over -30 to +85°C**
- **Available with a fast turnround service**



RoHS

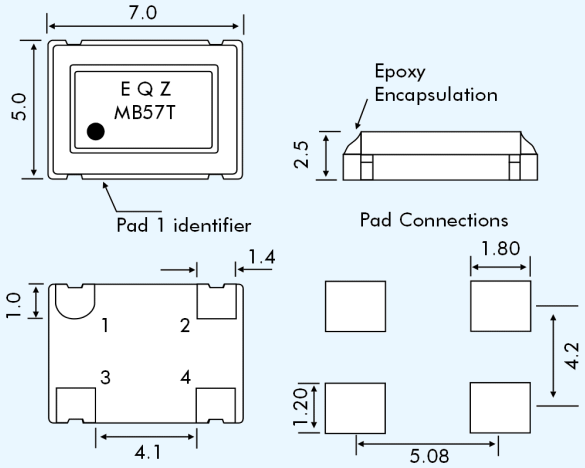
DESCRIPTION

The MB57T series TCXO is packaged in 7 x 5mm, 4 pad ceramic SMD package. The part has a squarewave (CMOS) output and a stability of ±2.5ppm over the temperature range -30° to +85°C. The part has a 0.01µF decoupling capacitor built in and may be produced as a TCXO or Voltage-Controlled TCXO (VCTCXO).

SPECIFICATION

Product Series Code	
TCXO:	MB57T
VCTCXO:	VMB57T
Frequency Range:	1.25MHz to 156.0MHz
Output Waveform:	Squarewave, HCMOS
Initial Calibration Tolerance:	<±2.0ppm at +25°±2°C
Standard Frequencies:	10.0, 12.8, 13.0, 14.4, 14.7456, 15.36, 16.384, 19.2, 19.440, 19.68, 25.0, 20.0, 27.0, 38.880, 40.0, 77.760, 125.0MHz (*Partial list*)
Frequency Stability	
vs. Temperature Change:	±2.5ppm over -30°~+85°C
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 (SMD type):	±1.0ppm max. for one reflow (*Measured after 24 hours*)
Supply Voltage:	+3.3VDC ±5%
Output Logic Levels:	Logic High: 90% Vdd min. Logic Low: 10% Vdd max.
Rise and Fall Times:	10ns max.
Duty Cycle:	50%±10% standard, 50%±5% option
Start-up Time:	5ms typical, 10ms max.
Current Consumption	
at 10.0MHz:	4mA max.
at 77.60MHz:	17mA max.
at 155.520MHz:	35mA max.
Output Load:	15pF
Storage Temperature:	-55~+125°C

MB57T - OUTLINES AND DIMENSIONS



1 TCXO: Do not connect
VCTCXO: Voltage Control
2 Ground
3 Output
4 Supply Voltage

VMB57T VOLTAGE CONTROL SPECIFICATION

Control Voltage:	Standard = +1.5±1.0Volts
Frequency Deviation:	±6.0 ppm min. (Vcon = +4.5V±1.0V)
Slope Polarity:	Positive *(increase of control voltage increases output frequency.)*
Input Impedance:	50kΩ minimum
Modulation Bandwidth:	20kHz minimum
Linearity:	±10% maximum

SSB PHASE NOISE at 25°C

Offset		10Hz	100Hz	1kHz	10kHz	100kHz
Part = MB57T33	at 10.0Mhz (dBc/Hz)	-115	-135	-148	-152	-155
	at 155.250Mhz (dBc/Hz)	-72	-110	-125	-132	-125

PART NUMBER FORMAT

Example: **MB57T33-38.880-2.5/-30+85**

Series Description
TCXO = MB57T
VCTCXO = VMB57T
Supply Voltage 3.3VDC
Frequency (MHz)
Stability over OTR (±ppm)
Operating Temperature Range (OTR) (°C)

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