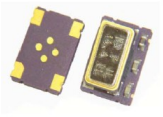
Clipped Sinewave 7.0 x 5.0 x 2.0mm SMD

- **Miniature SMD package 7 x 5 x 2mm**
- **Frequency range: 10MHz to 27MHz**
- **Close tolerance stabilities from ±0.5ppm over 0° to +50°C**
- **±1ppm over -40 to +85°C**
- **Very low power consumption**

RoHS



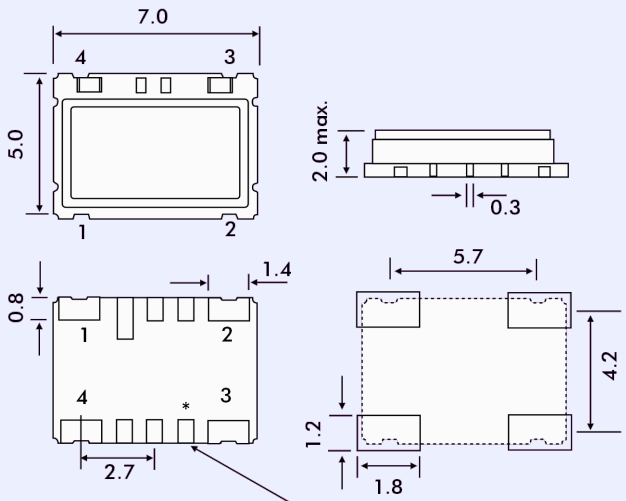
DESCRIPTION

M57S series TCXOs are packaged in the industry-standard 7 x 5mm package. With clipped sinewave output, close tolerances are available from ±0.5ppm over 0° to 50°C or ±1ppm over -40° to +85°C. The part has very low power consumption.

SPECIFICATION

Product Series Code	
TCXO:	M57S
VCTCXO:	VM57S
Frequency Range:	10.0MHz to 27.0MHz
Output Waveform:	Clipped Sinewave
Initial Calibration Tolerance**:	<±1ppm at 25°C
Standard Frequencies:	10.0, 12.80, 13.0, 14.40, 15.36, 16.384, 19.2, 19.440, and 19.68MHz (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:	+2.8, +3.0 or +5.0Volts *(Specify when ordering)*
Output Voltage Level:	0.8V p-p minimum
Start-up Time:	2ms typical, 5ms max.
Current Consumption:	*See table below*
Output Load:	10kΩ//10pF ±10%
Harmonic Distortion:	-10dB typical, -7dB max.
SSB Phase Noise:	*See table*
Output Format:	DC block, AC coupled
Storage Temperature:	-50° to +100°C

M57S - OUTLINES AND DIMENSIONS



Pad Connections
1 Not connected or Voltage Control for VCTCXO
2 Ground
3 Output
4 Supply Voltage

** Note: the unidentified pads, six in number, are for factory use only.*

VM57S VOLTAGE CONTROL SPECIFICATION

Control Voltage:	Standard = +1.5±1.0Volts for all input voltages. *(Contact technical sales if +2.5±2.0 Volts is required.)*
Frequency Deviation:	±6.0 ppm min.
Slope Polarity:	Positive *(increase of control voltage increases output frequency.)*
Input Impedance:	1.0MΩ min.
Modulation Bandwidth:	3.0kHz min. measured at -3dB
Linearity:	10% max.

FREQUENCY STABILITY

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

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

PHASE NOISE

SSB Phase Noise at 25°C	Offset (Hz)	10	100	1k	10k	100k
	M32S 13MHz (dBc/Hz)	-80	-115	-135	-148	-150

CURRENT CONSUMPTION

		Max. Current
Frequency Range	9.6 to 15MHz	1.5mA
	15.01 to 26MHz	2.0mA
	26.01 to 40MHz	2.5mA

PART NUMBERING PROCEDURE

Example: **M57S3-19.44-2.5/-30+75**

Series Description
TCXO = M57S
VCTCXO = VM57S
Supply Voltage
28 = 2.8 VDC
3 = 3.0 VDC
5 = 5.0 VDC
Frequency (MHz)
Stability over OTR (±ppm)
Operating Temperature Range (OTR) (°C)
Lower and upper limits.

MERCURY ELECTRONICS EUROPE Blacknell Lane CREWKERNE Somerset UK TA18 7HE
Tel: +44 (0)1460 230010 Fax: +44 (0)1460 230011, info@mecxtal-europe.com, www.mecxtal-europe.com