Clipped Sinewave 8 pin DIL

- **8 pin DIL package with mechanical trimmer**
- **Frequency range: 9.6MHz to 27.0MHz**
- **Supply voltage 2.8 to 5.0 Volts**
- **Customized specifications available**

RoHS

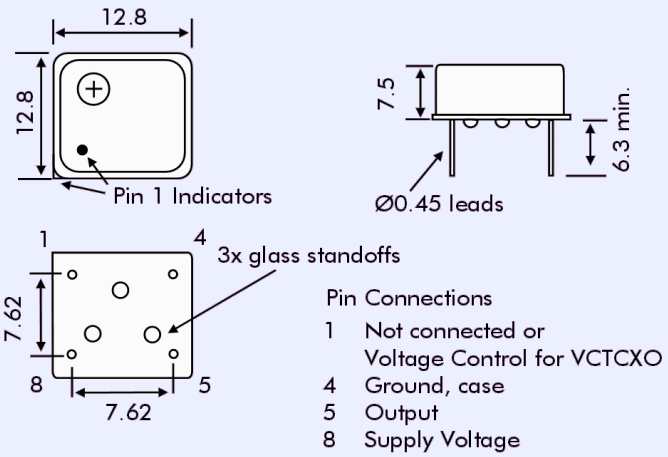
DESCRIPTION

M9S series TCXOs are packaged in the industry-standard 14 pin Dual-in-Line package. With clipped sine wave output, tolerance is from ±1.0ppm over 0° to 50°C to ±1ppm over -30° to +70°C. Supply voltage 2.8 to 5.0 Volts.

SPECIFICATION

Product Series Code	
TCXO:	M9S
VCTCXO:	VM9S
Frequency Range:	9.60MHz 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
RoHS Status:	RoHS Compliant version available. See part numbering procedure.

M9S - OUTLINES AND DIMENSIONS



VM9S 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

CURRENT CONSUMPTION

Supply Voltage		Max Current +3.0V	Max Current +5.0V
Frequency Range	10.0 to 13MHz	1.3mA	2.0mA
	13.01 to 20MHz	1.5mA	2.2mA
	20.01 to 27MHz	2.0mA	2.5mA

PHASE NOISE

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

PART NUMBERING PROCEDURE

Example: **_M9_S 3 -19.44-2.5/-30+75**

Series Description
TCXO = M9
VCTCXO = VM9
RoHS Status
'G' = RoHS Compliant
Output type
'S' = Clipped sine wave
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