

- 14 pin DIL compatible package
- Wide frequency range: 27.0MHz to 200.0MHz
- Supply voltage 3.3 Volts
- Frequency stability from ± 1 ppm over -30 to +75°C
- RoHS compliant



DESCRIPTION

EMV38GT series TCXOs are packaged in a 14 pin DIL compatible package. With squarewave (CMOS) output, tolerances are available from ± 1.0 ppm over -30° to +75°C. The part has a 0.01 μ F decoupling capacitor built in.

SPECIFICATION

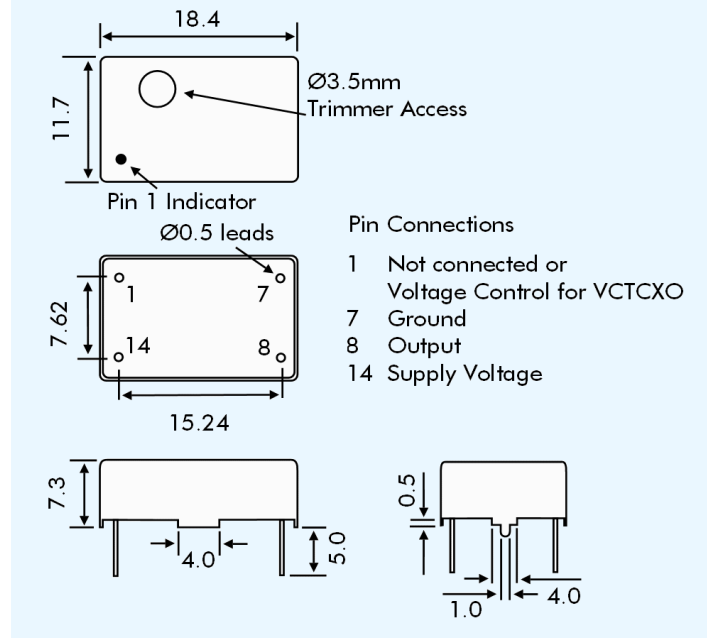
Product Series Code	TCXO: EMV38GT VCTCXO: VEMV38GT
Frequency Range:	27.0MHz to 200.0MHz
Output Waveform:	Squarewave, HCMOS
Initial Calibration Tolerance	
Models without trimmer:	$< \pm 2.0$ ppm
Models with trimmer:	$< \pm 1.0$ ppm
Standard Frequencies:	30.0, 32.768, 38.880, 40.0, 50.0, 54.0, 64.0, 65.536, 77.76, 80.0, 128.0, 160.0 and 200.0MHz (Partial list)
Operating Temperature Range:	See table
Mechanical Frequency Tuning:	± 3.0 ppm minimum
Frequency Stability	
vs. Ageing:	± 1.0 ppm max. first year
vs. Voltage Change:	± 0.3 ppm max. $\pm 5\%$ change
vs. Load Change:	± 0.3 ppm max. $\pm 10\%$ change
vs. Reflow (SMD type):	± 1.0 ppm max. for one reflow (Measured after 24 hours)
Supply Voltage:	+3.3 Volts
Output Logic Levels:	Logic High: 90% Vdd min. Logic Low: 10% Vdd max.
Current Consumption:	40mA maximum
Rise and Fall Times:	10ns typical
Duty Cycle:	50% \pm 10% standard,
Start-up Time:	5ms typical, 10ms max.
Current Consumption:	See table below
Output Load:	15pF
Storage Temperature:	-55~+125°C

FREQUENCY STABILITY

Temp. Range (°C)	Stability (ppm)	± 0.5	± 1.0	± 1.5	± 2.0	± 2.5	± 3.0
		0 ~ +50	✓	✓	✓	✓	✓
-10 ~ +60	ASK	✓	✓	✓	✓	✓	✓
-20 ~ +70	X	✓	✓	✓	✓	✓	✓
-30 ~ +75	X	✓	✓	✓	✓	✓	✓
-40 ~ +85	X	X	X	ASK	ASK	✓	✓

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

EMV38GT - OUTLINES AND DIMENSIONS



VEMV38GT VOLTAGE CONTROL SPECIFICATION

Control Voltage:	Standard = +1.5 \pm 1.0Volts for all input voltages. (Contact technical sales if +2.5 \pm 2.0 Volts is required.)
Frequency Deviation:	± 6.0 ppm min. (Vcon = +4.5V \pm 1.0V)
Slope Polarity:	Positive (increase of control voltage increases output frequency.)
Input Impedance:	2M Ω minimum
Modulation Bandwidth:	25kHz minimum
Linearity:	$\pm 10\%$ maximum

SSB PHASE NOISE at 25°C

Offset		10Hz	100Hz	1kHz	10kHz	100kHz
Part = EMV38GT33	at 77.760Mhz (dBc/Hz)	-80	-110	-135	-130	-132
	at 155.520Mhz (dBc/Hz)	-80	-110	-125	-120	-125

PART NUMBERING SCHEDULE

Example: **EMV38GT33-200.00-2.5/-30+75**

Series Description TCXO = EMV38GT*
VCTCXO = VEMV38GT

Supply Voltage 33 = 3.3 VDC

Frequency (MHz) 200.00

Stability over OTR (\pm ppm) 2.5

Operating Temperature Range (OTR) (°C) -30+75

Lower and upper limits

* Note, 'G' indicates RoHS Compliant part