

HCMOS 8 pin DIL, 'V' Group

- 8 pin DIL package with trimmer
- Wide frequency range: 27.0MHz to 200.0MHz
- Supply voltage 3.3 Volts
- Frequency stability from ± 1 ppm over -30 to $+75^{\circ}\text{C}$



DESCRIPTION

EMV9T series TCXOs are packaged in an 8 pin DIL package with mechanical trimmer. With squarewave (CMOS) output, tolerances are available from ± 1.0 ppm over -30° to $+75^{\circ}\text{C}$. The part has a $0.01\mu\text{F}$ decoupling capacitor built in.

SPECIFICATION

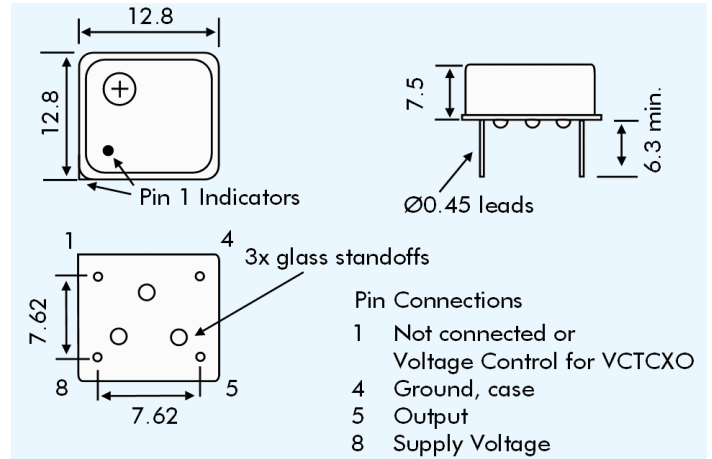
Product Series Code	TCXO: EMV9T VCTCXO: VEMV9T
Frequency Range:	27.0MHz to 200.0MHz
Output Waveform:	Squarewave, HCMOS
Initial Calibration Tolerance	
Models without trimmer:	$< \pm 2.0$ ppm
Models with trimmer:	$< \pm 1.0$ ppm
Standard Frequencies:	30.0, 32.768, 38.880, 40.0, 50.0, 54.0, 64.0, 65.536, 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:	$-55 \sim +125^{\circ}\text{C}$

FREQUENCY STABILITY

Stability (ppm)		± 0.5	± 1.0	± 1.5	± 2.0	± 2.5	± 3.0
Temp. Range ($^{\circ}\text{C}$)	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

EMV9T - OUTLINES AND DIMENSIONS



VEMV9T 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:	± 6.0 ppm min. (Vcon = $+4.5\text{V} \pm 1.0\text{V}$)
Slope Polarity:	Positive (increase of control voltage increases output frequency.)
Input Impedance:	$2\text{M}\Omega$ minimum
Modulation Bandwidth:	25kHz minimum
Linearity:	$\pm 10\%$ maximum

SSB PHASE NOISE at 25°C

Offset		10Hz	100Hz	1kHz	10kHz	100kHz
Part = EMV9T33	at 77.760MHz (dBc/Hz)	-80	-110	-135	-130	-132
	at 155.520MHz (dBc/Hz)	-80	-110	-125	-120	-125

PART NUMBERING SCHEDULE

