

HCMOS 4 pad SMD, kHz Range

- Miniature 11.4 x 9.6 x 2.5mm SMD package
- Frequency range: 20.0 to 50.0kHz; 32.768kHz
- Supply voltage 3.3 or 5.0 Volts
- Frequency stability from ±1ppm over -30 to +75°C

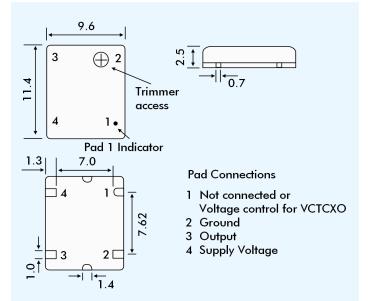
DESCRIPTION

EM42T series TCXOs are packaged in a miniature 4 pad ceramic SMD package. With squarewave (CMOS) output, tolerances are available from ± 1.0 ppm over -30° to +75°C. The part has a 0.01µF decoupling capacitor built in.

SPECIFICATION

Product Series Code				
TCXO:	EM42T			
VCTCXO:	VEM42T			
Frequency Range:	32.768kHz Standard frequency			
1 , 0	20.0kHz to 50.0kHz			
Output Waveform:	Squarewave			
Initial Calibration Tolerance	· ·			
Models with mech. trimmer:	<1.0ppm (at t. 25°±2°C)			
Models without trimmer:	<2.0ppm (at t. 25°±2°C)			
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. $\pm 10\%$ change			
vs. Reflow:	±1ppm max. for one reflow			
	(Measured after 24 hours)			
Supply Voltage:	+3.3 or +5.0Volts			
	(Specify when ordering)			
Output Logic Levels:	Logic High: 90% Vdd min.			
	Logic Low: 10% Vdd max.			
Rise and Fall Times:	10ns max.			
Duty Cycle:	50%±5%			
Start-up Time:	2ms typical, 5ms max.			
Current Consumption:	See table below			
Output Load:	15pF			
Storage Temperature:	-55~+125°C			

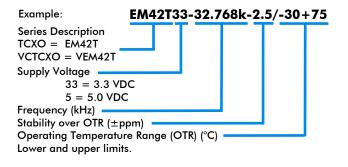
EM42T - OUTLINES AND DIMENSIONS



VEM42T 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:	10kΩ min.
Modulation Bandwidth:	3.0kHz min. measured at -3dB
Linearity:	10% max.

PART NUMBERING PROCEDURE



FREQUENCY STABILITY

Frequency St	tability (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	~

 \checkmark = available, x = not available, ASK = call Technical Sales

CURRENT CONSUMPTION

Frequency	+3.3 V
32.768kHz	8.0mA
50kHz	12mA