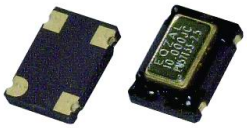
# EM572T Series TCXO

## HCMOS 7 x 5 x 2.3mm SMD, kHz Range

- **Miniature 7 x 5 x 2.3mm SMD package**
- **Frequency range: 20.0kHz to 52.7kHz including 32.768kHz**
- **Supply voltage 3.3 or 5.0 Volts**
- **Frequency stability from ±1ppm over -30 to +75°C**
- **RoHS compliant**



RoHS

### DESCRIPTION

EM572T series TCXOs are packaged in a miniature 4 pad ceramic SMD package. With squarewave (CMOS) output, tolerances are available from ±1.0ppm over -30° to +75°C. The part has a 0.01µF decoupling capacitor built in.

### SPECIFICATION

| | |
|---|---|
| Product Series Code | |
| TCXO: | EM572T |
| VCTCXO: | VEM572T |
| Frequency Range: | 20.0kHz to 52.7kHz |
| Standard Frequency: | 32.768kHz |
| Output Waveform: | Squarewave, HCMOS |
| Initial Calibration Tolerance: | <±2.0ppm at +25°±2°C |
| Operating Temperature Range: | *See table* |
| Frequency Stability | |
| vs. Ageing: | ±1.0 ppm max. first year |
| vs. Voltage Change: | ±0.2 ppm max. ±5% change |
| vs. Load Change: | ±0.2 ppm max. ±10% change |
| vs. Reflow (SMD type): | ±1.0ppm max. for one reflow (*Measured after 24 hours*) |
| Supply Voltage: | +2.8, +3.0, +3.3 or +5.0V (*See table*) |
| Output Logic Levels: | Logic High: 90% Vdd min.<br>Logic Low: 10% Vdd max. |
| Rise and Fall Times: | 10ns max. |
| Duty Cycle: | 50%±10% standard,<br>50%±5% option |
| Start-up Time: | 10ms max. |
| Current Consumption: | *See table below* |
| Output Load: | 15pF |
| Storage Temperature: | -55~+125°C |

### FREQUENCY STABILITY

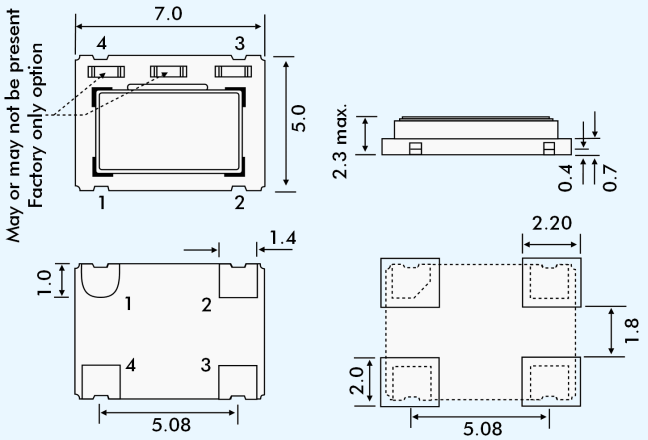
| Frequency Stability (ppm) | | ±0.5 | ±1.0 | ±1.5 | ±2.0 | ±2.5 |
|---|---|---|---|---|---|---|
| Temperature Range (°C) | 0 ~ +50 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | -10 ~ +60 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | -20 ~ +70 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | -30 ~ +75 | ASK | ✓ | ✓ | ✓ | STD |
| | -40 ~ +85 | x | ASK | ✓ | ✓ | ✓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

✓ = available, x = not available, ASK = call Tech. Sales
STD = Standard

### CURRENT CONSUMPTION

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

### EM572T - OUTLINES AND DIMENSIONS




Pad Connections:
1. VCTCXO: Voltage control
   TCXO: Not connected
2. Ground
3. Output
4. Supply Voltage

### VEM572T 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: | ±5 ppm (Vcon = +1.5±1.0V) |
| Slope Polarity: | Positive *(increase of control voltage increases output frequency.)* |
| Input Impedance: | 1MΩ minimum |
| Modulation Bandwidth: | 20kHz minimum |
| Linearity: | ±10% maximum |

### PART NUMBERING PROCEDURE

Example: **EM572T33-32.768k-2.5/-30+75**

Series Description
TCXO = EM572T
VCTCXO = VEM572T
Supply Voltage
33 = 3.3 VDC
5 = 5.0 VDC
Frequency (kHz)
Stability over OTR (±ppm)
Operating Temperature Range (OTR) (°C)
Lower and upper limits.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