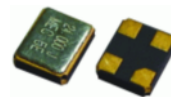


- Miniature 2.15 x 1.35mm SMD package
- Frequency: 32.768kHz
- Very low current consumption, 0.79µA at 1.8V supply
- Supply voltage 1.8, 2.5, 3.0 or 3.3 Volts
- Frequency stability ±8ppm over -40 to +105°C



### DESCRIPTION

EME21T series TCXOs are packaged in a miniature 4 pad ceramic SMD package. Low current consumption with squarewave (CMOS) output, tolerance is ±5.0ppm over -40° to +85°C.

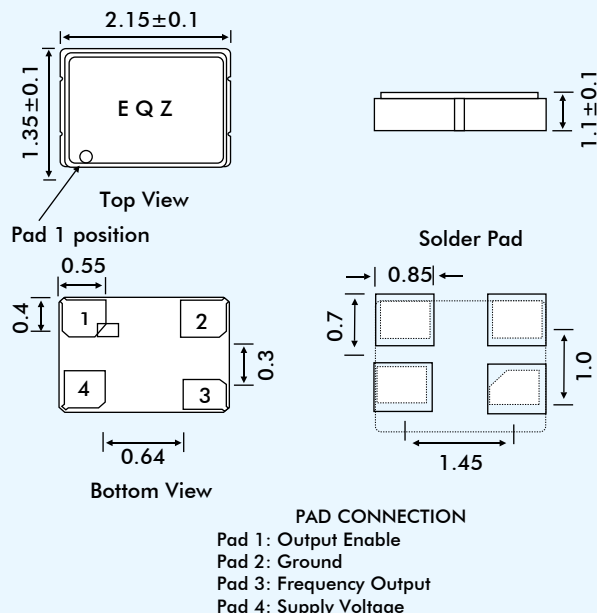
### SPECIFICATION

Product Series Code:	EME21T
Output Waveform:	CMOS Squarewave
Initial Calibration Tolerance:	±2.5ppm (at t. 25°±3°C)
Frequency Stability:	-10° to +60°C: ±3.8ppm -40° to +85°C: ±5.0ppm -40° to +105°C: ±8.0ppm
Timing error over time:	±0.432 s/day ±12.960 s/month ±2.628 m/year (T = 25°C)
Frequency Stability	
vs. Ageing:	±3.0 ppm max. first year
vs. Load Change:	±0.2 ppm max. ±10% change
vs. Reflow:	±3ppm max. for one reflow (Measured after 24 hours)
vs. All range of Vdd:	±1.0ppm/Volt max.
Output Logic / Output Load:	CMOS / 15pF
Output Voltage Level 'HIGH':	90% of Vdd
Output Voltage Level 'LOW':	10% of Vdd
Rise and Fall Times:	100ns max.
Duty Cycle:	50%±10% typical
Start-up Time:	1s max. at 25°C 3s max. Over -40° to +85°C
Pad 1 OE Thresholds:	Vih = 0.8*Vdd, Vil = 0.2*Vdd
Current Consumption:	1.0uA (typ.), 2.0uA (max.)

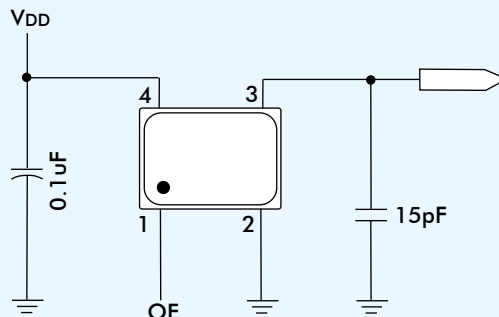
### POWER SUPPLY VOLTAGE

Supply Voltage	Tolerance
1.6V	±5%
1.8V	±5%
2.5V	±5%
3.0V	±5%
3.3V	±5%

### EME21T - OUTLINES AND DIMENSIONS



### TEST CIRCUIT



### PART NUMBERING PROCEDURE

Example:

**EME21T33-32.768k-5.0/-40+85**

Series Description  
TCXO = EME21T

Supply Voltage

18 = 1.8 VDC  
25 = 2.5 VDC  
3 = 3.0 VDC  
33 = 3.3 VDC

Frequency (kHz)  
Stability over OTR (±ppm)  
Operating Temperature Range (OTR) (°C)  
(Lower and upper limits.)

Issue 3