EMW14T TCXO

CMOS 14 pin DIL, 'W' Group — 200.0MHz to 800.0MHz

- **14 pin DIL, hermetically-sealed package**
- **Frequency range: 200.01MHz to 800.0MHz**
- **Supply voltage 3.3 Volts**
- **Frequency stability from ±1ppm over -30 to +75°C**

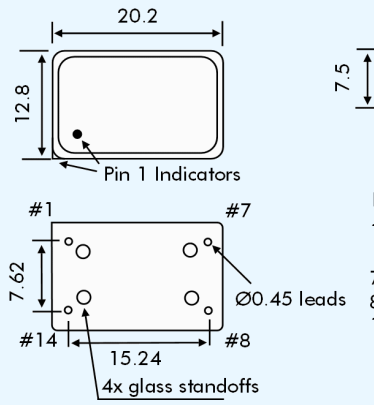
DESCRIPTION

EMW14T series TCXOs are packaged in a standard 14 pin DIL 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:	EMW14T
VCTCXO:	VEMW14T
Frequency Range:	200.01MHz to 800.0MHz
Output Waveform:	Squarewave, HCMOS
Initial Calibration Tolerance:	<±2.0ppm at +25°±2°C
Standard Frequencies:	200.0, 204.8, 311.04, 400.0, 409.6 and 622.08MHz (*Partial list*)
Mechanical Frequency Tuning:	Not implemented
Operating Temperature Range:	(see *table*)
Frequency Stability	(see *table*)
vs. Ageing:	±1.0 ppm max. first year
vs. Voltage Change:	±0.3 ppm max. ±5% change
vs. Load Change:	±0.3 ppm max. ±10% change
vs. Reflow (SMD type):	±1.0ppm 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:	65mA max. (*Freq. dependant*)
Rise and Fall Times:	1.2ns typical
Duty Cycle:	50%±5%
Start-up Time:	5ms typical, 10ms max.
Current Consumption:	*See table below*
Output Load:	15pF
Storage Temperature:	-55~+125°C

EMW14T - OUTLINES AND DIMENSIONS



Pin Connections

1 Not connected or Voltage control for VCTCXO
7 Ground, case
8 Output
14 Supply Voltage

VEMW14T 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. (Vcon = +4.5V±1.0V)
Slope Polarity:	Positive *(increase of control voltage increases output frequency.)*
Input Impedance:	2MΩ minimum
Modulation Bandwidth:	25kHz minimum
Linearity:	±10% maximum

SSB PHASE NOISE at 25°C

Offset		10Hz	100Hz	1kHz	10kHz	100kHz
Part = EMW14T33	at 622.080MHz (dBc/Hz)	-50	-77	-102	-115	-108

FREQUENCY STABILITY

Stability (ppm)		±0.5	±1.0	±1.5	±2.0	±2.5	±3.0
Temp. Range (°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

PART NUMBERING SCHEDULE

Example: **EMW14T33-409.60-2.5/-30+75**

Series Description
TCXO = EMW14T
VCTCXO = VEMW14T
Supply Voltage
33 = 3.3 VDC
Frequency (MHz)
Stability over OTR (±ppm)
Operating Temperature Range (OTR) (°C)
Lower and upper limits

EUROQUARTZ LIMITED Blacknell Lane CREWKERNE Somerset UK TA18 7HE
Tel: +44 (0)1460 230000 Fax: +44 (0)1460 230001 info@euroquartz.co.uk www.euroquartz.co.uk