

EM14GT Series TCXO

HCMOS, 14 pin DIL, MHz Range

- 14 pin DIL industry-standard package
- Wide frequency range: 1.25MHz to 156.0MHz
- Supply voltage 2.8, 3.0, 3.3 or 5.0 Volts
- Frequency stability from ±1ppm over -30 to +75°C
- RoHS compliant

DESCRIPTION

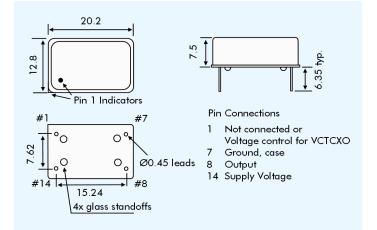
EM14GT series TCXOs are packaged in the industry-standard 14 pin DIL package. With squarewave (CMOS) output, tolerances are available from ± 1.0 ppm over -30° to +75°C. The part has a 0.01μ F decoupling capacitor built in.

SPECIFICATION

Product Series Code					
	TCXO:	EM14GT			
	VCTCXO:	VEM14GT			
Frequency Range:		1.25MHz to 156.0MHz			
Output Waveform	:	Squarewave, HCMOS			
Initial Calibration	Tolerance:	<±1.0ppm at +25°±2°C			
Standard Frequen	cies:	10.0, 12.8, 13.0, 14.4, 15.36, 16.384, 19.2, 19.440, 19.68, 25.0, 20.0, 27.0, 38.880, 40.0, 77.760, 125.0, 155.520 (Partial list)			
Operating Temper		See table			
Frequency Stability	y -				
vs. Load	ng: Ige Change: Change: w (SMD type):	±1.0 ppm max. first year ±0.3 ppm max. ±5% change ±0.3 ppm max. ±10% change ±1.0ppm max. for one reflow (Measured after 24 hours)			
Mechanical Freque	ency Tuning:	±3ppm minimum			
Supply Voltage:		+2.8, +3.0, +3.3 or +5.0V (See table)			
Output Logic Leve	ls:	Logic High: 90% Vdd min. Logic Low: 10% Vdd max.			
Rise and Fall Time	s:	10ns max.			
Duty Cycle:		50%±10% standard, 50%±5% option			
Start-up Time:		5ms typical, 10ms max.			
Current Consump	tion:	See table below			
Output Load:		15pF			
Storage Temperat	ure:	-55~+125°C			



EM14GT - OUTLINES AND DIMENSIONS



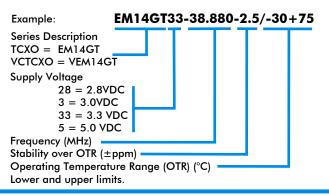
INPUT VOLTAGE & CURRENT CONSUMPTION

Input Voltage/ Frequency	+2.8V	+3.0	+3.3V	+5.0 V
8.192MHz	2mA	2n	5mA	
10.0MHz	3mA	4n	7mA	
77.760MHz	14mA	17	32mA	
155.520MHz	26mA	35mA		50mA

SSB PHASE NOISE at 25°C

Offset		10Hz	100Hz	1kHz	10kHz	100kHz
Part =	at 10.0Mhz (dBc/Hz)	-115	-135	-148	-152	-155
EM14GT33	at 155.250Mhz (dBc/Hz)	-72	-110	-125	-132	-125

PART NUMBERING SCHEDULE



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FREQUENCY STABILITY

Frequency Stability (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	х	~	~
	-40 ~ +85	x	x	x	x	~

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

VEM14GT 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 = $+4.5V \pm 1.0V$)
	Slope Polarity:	Positive (increase of control voltage increases output frequency.)
	Input Impedance:	50k Ω minimum
	Modulation Bandwidth:	20kHz minimum
	Linearity:	±10% maximum