Temperature Compensated Crystal Oscillators (TCXO's)

TC-200

Description:

Vectron International has introduced a series of low jitter complementary PECL TCXO's for use in SONET Minimum Clock (SMC) applications and is available in Output frequencies from 311.04 MHz to 777.6 MHz.

Features:
- **True SONET Minimum performance**
- **Ultra low Jitter**
- **3.3 Vdc or 5 Vdc operation**
- **Complementary PECL output**

Performance Characteristics

Parameter	Characteristics
Frequencies:	311.04 MHz to 777.6 MHz
Package Size:	30.48 x 25.4 x 6.35 mm (1.2" x 1.0" x 0.25")
Supply Voltage (Vcc): (other options are available upon request)	**C** = 5.0 Vdc ±5% **D** = 3.3 Vdc ±5%
Current:	<200 mA
Output:	Complementary PECL
Output Level (@ +25°C):	Voh ("1") = Vcc Vol ("0") = Vcc - 1.63 V max
Rise/Fall Time:	<400 ps (20% to 80%)
Symmetry (Duty Cycle):	50/50 ±5% @ Vcc - 1.3 V
Temperature Stability:	**C-416** - ±4.1 ppm over 0°C to +70°C (per GR-253-CORE : R5-126) **F-416** - ±4.1 ppm over -40°C to +85°C (per GR-253-CORE : R5-126) **NOTE:** Tighter stabilities and wider temperature ranges are available, please consult the factory.
Initial Accuracy @ +25°C:	**B** ±5 ppm max after reflow, Total Stability <20 ppm All Causes.
Aging:	<10 ppm for ten years
Jitter Generation:	<1 ps rms from 12 kHz to 80 MHz
Frequency vs. Supply:	<±0.2 ppm for a ±5% change in supply voltage
Electrical Frequency Adjust:	**A** ±40 ppm min., 0 to Vcc, positive slope (per GR-253-CORE: R5-129)

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Outline Drawing
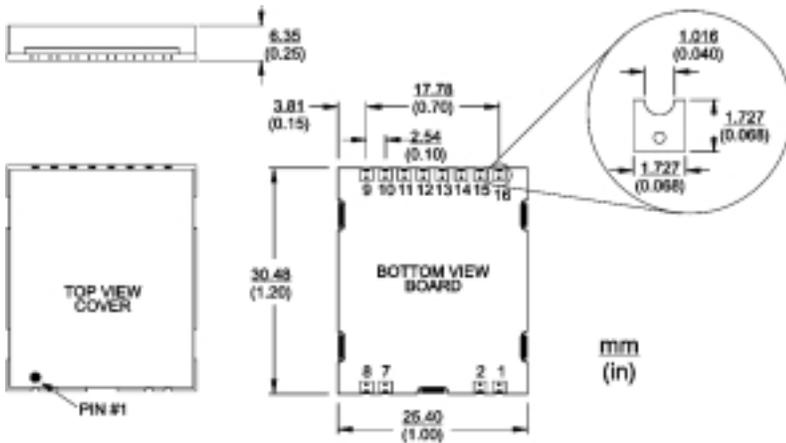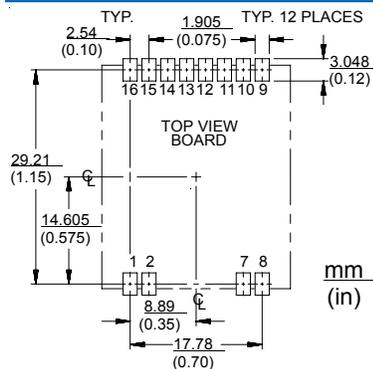

Pin Out Information

Pin	Function
1	Electrical Frequency Adjust; 0 to Vcc. or No Connect
2	Ground
3	Missing
4	Missing
5	Missing
6	Missing
7	Ground
8	Vcc - Supply Voltage
9	Vcc - Supply Voltage
10	Lock Detect
11	Ground
12	Output Signal - Q
13	Ground
14	Comp Output Signal - $\overline{Q}$
15	Ground
16	Enable / Disable Floating = Enabled Logic "0" = Disabled

TCXO

Standard Frequencies

311.04 MHz	SONET
622.08 MHz	OC-12, STM4
625.00 MHz	10 G / 16
644.5313 MHz	10.3125 G / 16
666.5143 MHz	OC-12 FEC 15/14
669.3266 MHz	OC-12 FEC 255/237
777.60 MHz	SONET

Pad Layout

Ordering Information

Product Family
TC = TCXO

Package
200 = SMT package

Supply Voltage
C = 5.0 Vdc ±5%
D = 3.3 Vdc ±5%

Output
F = Complementary PECL

Temperature & Stability
C-416 = ±4.1 ppm over 0ºC to +70ºC
F-416 = ±4.1 ppm over -40ºC to +85ºC

Frequency Adjust Options
A = Electrical Frequency Adjust (Standard)
B = Fixed Frequency No Electrical Adjust, See "Initial Accuracy" previous page.

Output Frequency
See Standard Freq Chart Above