

HCMOS/TTL TCXO / VC-TCXO IN 14 PIN DIP COMPATIBLE PACKAGE - TCTC Series

FEATURES

- RoHS Compliant (Pb-Free), Tight Stability over Wide Temperature Range
- Available with both Voltage Control for Electric Frequency Adjustments and Internal Trimmer
- HCMOS/TTL Compatible, Low Phase Noise
- 14-pin DIP Compatible Package, Industry de factor Standard Footprint

SPECIFICATIONS

Frequency Range 1.5 MHz to 40 MHz

Standard Frequency 12.8/13.0/14.4/15.36/16.8/19.44/20.0/24.576/30.0/40.0 MHz

 $A = 5.0 \text{ VDC} \pm 5\%$; $B = 3.3 \text{ VDC} \pm 5\%$ Supply Voltage (Vcc)

Input Current 20 mA Maximum (1.5 MHz to 9.999 MHz); 30 mA Maximum (10 MHz to 35 MHz)

Storage Temperature -40°C to 85°C

Controllable Frequency Option VI = Voltage control: ±5 ppm Minimum + Internal trimmer: ±3 ppm Minimum

> I = Internal trimmer only (no voltage control input): ±3 ppm Minimum 2.5±2.0 VDC for Vcc = 5 VDC; 1.65±1.5 VDC for Vcc = 3.3 VDC

Setability of Vc at Fnom, 25°C 2.5±0.5 V DC for 5.0V part; 1.65±0.4 VDC for 3.3V part

Frequency Stability vs Temp.

Temperature Range Standard Stability

Control Voltage (Vc)

 $005 = \pm 0.5$ ppm; $010 = \pm 1$ ppm; $015 = \pm 1.5$ ppm; $020 = \pm 2$ ppm; $025 = \pm 2.5$ ppm

 $A = 0^{\circ}C$ to $70^{\circ}C$; $B = -40^{\circ}C$ to $85^{\circ}C$; $F = 0^{\circ}C$ to $50^{\circ}C$; $H = -30^{\circ}C$ to $75^{\circ}C$

 $025H = \pm 2.5 \text{ ppm} / -30^{\circ}\text{C} \text{ to } 75^{\circ}\text{C}$

Frequency Stability vs Vcc

Frequency Stability vs Load

Aging **Phase Noise**

Output Load Logic "1" / Logic "0" Level

Rise/Fall Time (Tr/Tf)

±0.3 ppm Maximum / Vcc ± 5% ±0.3 ppm Maximum / ±2 pF ±1 ppm Maximum per year @25°C

-145 dBc/Hz at 1KHz

10 TTL or 15 pF HCMOS Maximum

TTL: 2.4V Minimum / 0.4V Maximum; HCMOS: 0.9Vcc Minimum / 0.1Vcc Maximum

10 ns Maximum

Duty Cycle 0 = No tristate 60/40%; 2 = No tristate 55/45%



