

TC31-3

S.M.D. TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR (TCXO)

The TC31-3 series provides a range of compact temperature compensated crystal oscillators operating at +3.3V supply with either HCMOS or clipped sinewave outputs. The optional voltage control feature and small size makes this range of TCXO's an ideal choice for existing and future applications where reliability, cost and performance are critical factors.



ADVANTAGES

- † Surface Mount
- † Small size
- † Optional Output and Adjust Method.
- † Wide Operating Frequency Range

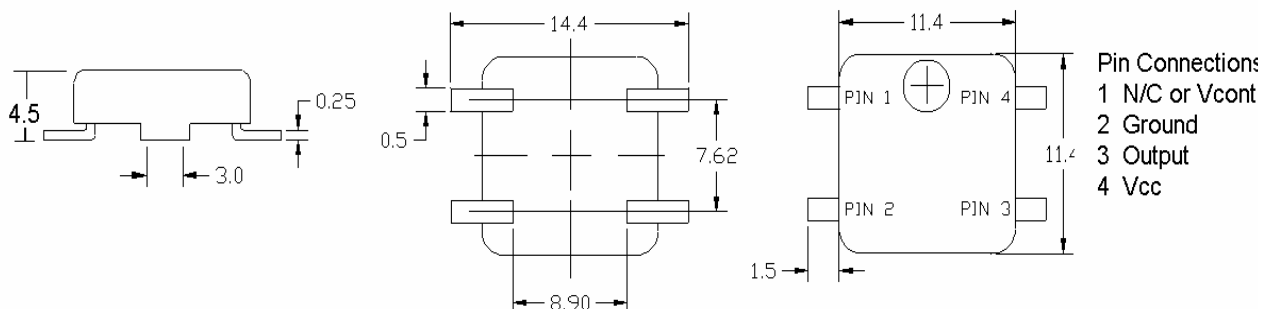
APPLICATIONS

- † Telecommunications
- † Portable Instrumentation
- † Mobile Communications.
- † Global Positioning Systems (GPS)

ELECTRICAL PERFORMANCE (Ta=25°C, CL = 10k Ω //10pF and Vcc = +3.3V)

PARAMETER	MINIMUM	MAXIMUM	UNITS
NOMINAL FREQUENCY (Fo)	10	45	MHz
CALIBRATION TOLERANCE	-1.0	+1.0	ppm
FREQUENCY STABILITY			ppm
Over Temperature Range (See Note 2)	-2.5	+2.5	
Ageing (per year at +25°C)	-1.0	+1.0	
Over Supply Voltage Variation (Vcc = +3.3V \pm 5.0%)	-0.3	+0.3	
OPERATING TEMPERATURE RANGE (See Note 2)	-20	+70	°C
STORAGE TEMPERATURE RANGE	-40	+85	°C
SUPPLY VOLTAGE (Vcc) (See Note 2)	+3.135	+3.465	V
SUPPLY CURRENT (Dependant upon nominal frequency)	2.0	15.0	mA
OUTPUT WAVEFORM HCMOS/TTL (Order code TC31-3A)			
Logic Levels	0.1Vcc	0.9Vcc	V
Duty Cycle (@ Vcc/2)	40	60	%
Fall and rise times	3	10	ns
OUTPUT WAVEFORM Clipped sinewave (Order code TC31-3B)			V
Peak to Peak amplitude	0.7		
FREQUENCY ADJUSTMENT (Internal trimmer)	\pm 3		ppm
VOLTAGE CONTROL +1.65V \pm 1.5V (Add suffix V to order code)	\pm 5		ppm

Parameter	Standard Observed
Mechanical Shock	MIL-STD-202 Method 213, Condition C
Vibration	MIL-STD-202 Method 201, 204, and 214
Solderability	IPC/EIA-STD-002A



- NOTES**
- 1) To order, state part number, options and nominal frequency e.g. TC31-3AV 20.000MHz
 - 2) Other temperature ranges, stabilities and supply voltages are readily available upon request.
 - 3) Other specifications available upon request.

Precision Devices INC. – 8840N. Greenview Drive, Middleton WI 53562, Tel- 1-800-274-XTAL, Fax- 1-608-831-3343,
 www.pdixtal.com Outside US Phone- 608-381-4445, E-mail- sales@pdixtal.com
 PD (HK) Ltd. – Tel- (852)-2367-3626, Fax- (852)-2646-3122, E-mail- sales@pdixtal.com.hk
 PD (UK) Ltd. – Tel- +44 (0)1223 834444, Fax- +44(0)1223 834589, E-mail- sales@pdixtal.co.uk