

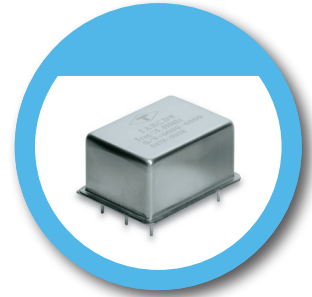
# 36.3 x 27.2 Oven Controlled Crystal Oscillator – NI Type

## FEATURE

- Dimension 36.0 x 27.2 x 18.7 mm typical.
- SC Cut Crystal.
- High stability ; Low Phase Noise.
- Sine Wave or CMOS output ; Fast warm-up.
- Packing: 40pcs/Box, 5 Box/Carton, 200pcs /Carton.

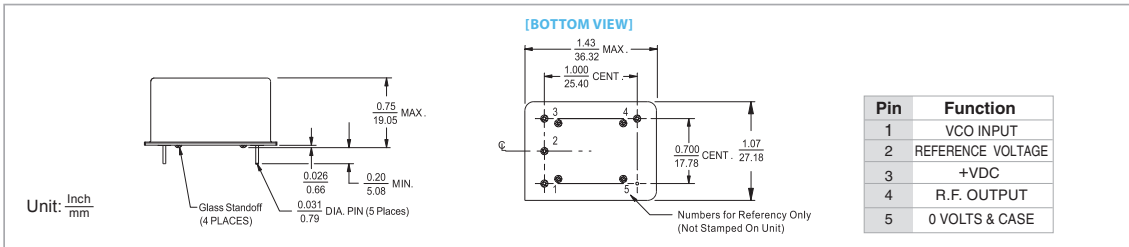
## TYPICAL APPLICATION

- SDH/SONET, Telecommunication base station
- Test and measurement equipment
- Aerospace
- Synthesizer, Digital switch, Reference Timing Circuit



**RoHS Compliant Standard**

## DIMENSION



## ELECTRICAL SPECIFICATION

Parameter	Min.	Nominal	Max.	Unit	Test Condition	
<b>Output</b>	Frequency	10		MHz		
	Wave Form		Sine Wave			
	Level	6.0	8.0	10.0	dBm	
	Load		50		$\Omega$	
	Harmonics		-30		dBc	
Spurious		-60				
<b>Frequency Stability</b>	Ambient			$\pm 20$	ppb	Referenced to +25°C
	Operating Temperature	-30		+70	°C	
	Aging					
	At time of shipment			$\pm 0.5$	ppb	After 30 days
	After indefinite storage - Daily			$\pm 0.5$		
	- Yearly			$\pm 100$		
	- 10 years			$\pm 300$		
	Voltage			$\pm 5$	dBc	$\pm 5\%$ Change
	Warm-up			$\pm 20$		In 4 minutes @ +25°C (Referenced to 4 Hour)
	Phase Noise @ 10 MHz			-120		@ 10Hz
			-135		@ 100Hz	
			-150		@ 1KHz	
			-150		@ 10KHz	
			-150		@ 100KHz	
<b>Electrical Frequency Adjustment</b>	Range	0.4		0.9	$\pm$ ppm	
	Control	0.0		8.0	V	
	Slope		Positive			
	Center	3.2	4.0	4.8	V	Control Voltage at which nominal Frequency occurs at time of shipment
<b>Input Power</b>	Input impedance	100			K $\Omega$	
	Voltage	11.4	12.0	12.6	V	
	Current			3.8	W	@ turn on
<b>Reference Voltage</b>	Steady state			1.5	W	@ 25°C
	Voltage	7.6	8.0	8.4	V	Optional 4.0V (Note1), 5.0V (Note2)
	Load	9.0		$\infty$	K $\Omega$	
Temperature Stability				$\pm 0.015$	VDC	

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

Note 1: For all +5V input power units. Note 2: For +12 V CMOS units.

\*All aging stabilities are after storage of up to 1 year and apply after 30 days of continuous operation.

The daily aging rate also applies at the time of shipment from factory.

\*The Electrical Frequency Adjustment Range is sufficient for the life of the oscillator. Specification subject to change with frequency.

Available Frequency Range: 5MHz to 80 MHz including 5.0, 10.0, 16.384, 19.44, 24.576 and 32.768 MHz.

## FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppb	$\pm 2$	$\pm 5$	$\pm 10$
0 ~ +70		○	○	○
-20 ~ +70		○	○	○
-40 ~ +85		△	○	○

\* ○: Available △: Conditional X: Not available