

NF Type

20.3 x 12.7 mm Oven Controlled Crystal Oscillator

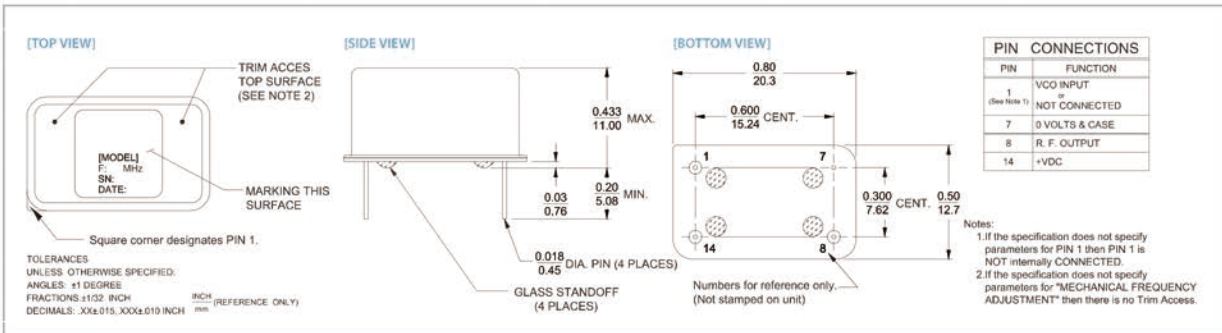
FEATURE

- Dimension 20.3 x 12.7 x 11.0 mm typical
- Stratum 3 (Overall ± 4.6 ppm including 10 years aging.)

TYPICAL APPLICATION

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

DIMENSION



ELECTRICAL SPECIFICATION

Parameter		Min.	Typ.	Max.	Unit	Test Condition & Notes
Output	Frequency		10		MHz	Available frequency range is from 5MHz to 40MHz. Standard frequencies are 10, 12.8, 15.36, 19.2, 20, 26 and 38.88MHz.
	Waveform		Rectangular			Sine wave output is available. Consult factory for more information.
	"1" Level	2.4			V	
	"0" Level			0.5		
	Load		15		pF	
	Duty cycle	45	50	55	%	@ 2.0 V
	Spurious			-60	dBc	
Frequency Stability	Ambient	-0.1		-0.1	ppm	-30°C to +70°C, referenced to +25°C Refer to Freq. Stability Vs Temp. Range table.
	Aging	-5.0		+5.0	ppb	Per day, at time of shipment
	Daily	-5.0		+5.0	ppb	after 30 days
	Yearly	-0.5		+0.5		
	10 years	-3.0		+3.0	ppm	
	Voltage	-50		+50	ppb	$\pm 5\%$ Change
	Warm-up	-0.1		+0.1	ppm	In 2 minutes @ +25°C, referenced to 1 hour
Phase Noise				-105	dBc/Hz	@ 10 Hz
				-130		@ 100 Hz
				-140		@ 1 kHz
				-150		@ 10 kHz
Electrical Frequency Adjustment						
Range				-5.0	ppm	VCO @ 0 V
		5.0			ppm	VCO @ +5.0 V
Control		0	2.5	5.0	V	
Slope			Positive			
VCO Input impedance		100			k Ω	
Input Power	Voltage	4.75	5.0	5.25	V	3.3V input voltage is available. Consult factory for control voltage and output level.
	Current			400	mA	@ turn on
	Steady state			0.8	W	@ +25°C

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppb	± 50	± 100	± 200
0 ~ +70		○	○	○
-30 ~ +70		△	○	○
-40 ~ +85		△	○	○

* ○: Available △: Conditional X: Not available

Note: not all combination of options are available. Other specifications may be available upon request.

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