

NF Type

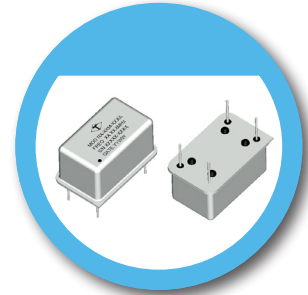
20.3 x 12.7 mm Oven Controlled Crystal Oscillator

FEATURE

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

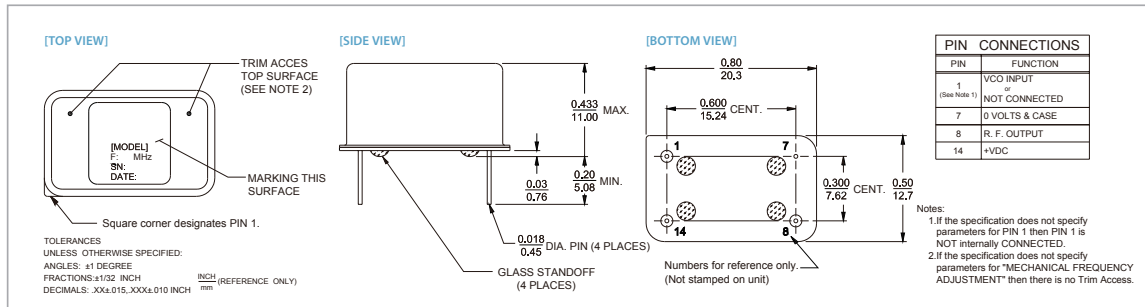
TYPICAL APPLICATION

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



RoHS Compliant

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	V	
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	ppm	
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 Slope	0	2.5	5.0	V	
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.