

# NK-H Type

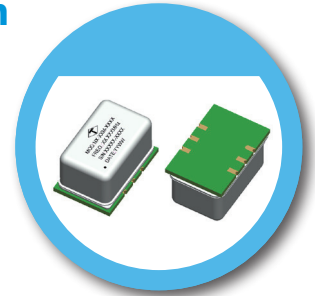
## 14.7 x 9.6 mm Hermetic Very Low Noise Oven Controlled Crystal Oscillator

### FEATURE

- Dimension 14.7 x 9.6 x 8.2 mm Typical
- 6-Pin Hermetic SMD Package
- Frequency Range, 10 MHz to 40MHz
- $\pm 10$  ppb Stability over -40 to 85°C
- Very Low Phase Noise

### TYPICAL APPLICATION

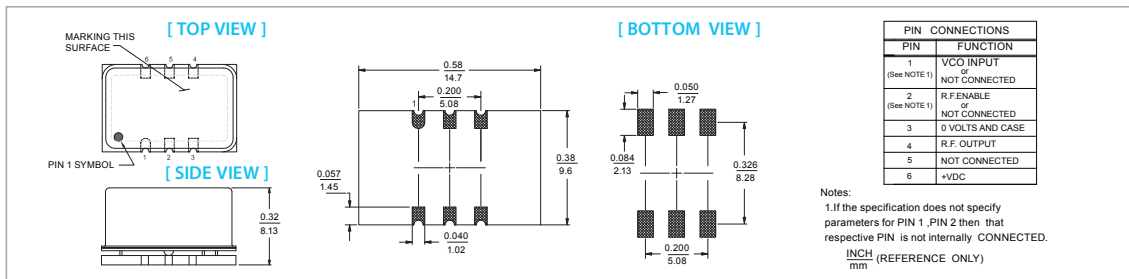
- SDH/SONET , Telecommunication Base Station
- Test and Measurement Equipment
- Synthesizer , Digital switch , Reference Timing Circuit
- Packet Timing Protocol (e.g. 1588)



RoHS Compliant

### DIMENSION

### SOLDER PAD LAYOUT



### ELECTRICAL SPECIFICATION

Parameter	Min.	Typ.	Max.	Unit	Test Condition & Notes
<b>Output</b> Frequency	—	20	—	MHz	Available frequency range is from 10MHz to 40MHz. Standard Frequencies :10, 19.2 and 20MHz.
Wave Form	—	Rectangular	—	—	Please contact us for detail information
Level	—	—	—	—	—
"1" Level	2.4	—	—	V	—
"0" Level	—	—	0.4		
Load	—	15	—	pF	—
Duty Cycle	45	50	55	%	@+1.65 V
Spurious	—	—	-60	dBc	—
<b>Frequency Stability</b> Ambient	-10	—	+10	ppb	-40°C to +85°C, referenced to +25°C Refer to Table : Freq.Stability vs Temp. Range.
Aging	—	—	—	—	—
Daily	-1.0	—	+1.0	ppb	after 30 days
Yearly	-0.2	—	+0.2		
10 years	-1.0	—	+1.0		
Voltage	-5	—	+5	ppb	$\pm 5\%$ Change
Warm-up	-0.1	—	+0.1	ppm	In 5 minutes @ +25°C, referenced to 1 hour
Phase Noise @ 20 MHz	—	-126	-120	dBc/Hz	@ 10 Hz
	—	-149	-145		@ 100 Hz
	—	-160	-157		@ 1 kHz
	—	-164	-162		@ 10 kHz
<b>Electrical Frequency Adjustment</b>	—	—	—	—	—
Range	—	—	-0.5	ppm	VCO@ 0V
Control	0.5	—	—		VCO@ 3.3V
Slope	0	1.65	3.3	V	—
Input impedance	100	—	—	Kohm	—
<b>Input Power</b> Voltage	3.135	3.3	3.465	V	5.0V input voltage is available. Please contact us for detail information.
Current	—	—	600	mA	@ turn on
Steady state	—	0.5	0.6	W	@ +25°C

### FREQ. STABILITY vs. TEMP. RANGE

Temp. ( C)	ppb	$\pm 5$	$\pm 10$	$\pm 20$	$\pm 30$
-20 ~ +70	○	○	○	○	○
-40 ~ +85	△	○	○	○	○

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

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

Specifications subject to change without notice.