

NJ Type Oven Controlled Crystal Oscillator

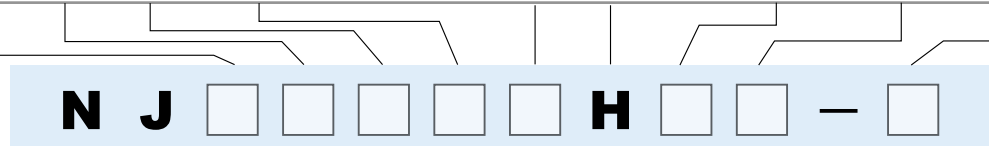
FEATURE

1. Typical 25.4 × 22.1 × 15.3 mm.
2. SC-Cut Crystal
3. High stability ; Low Phase Noise.
4. Sine Wave or CMOS output ; Fast Warm-up.

ORDERING INFORMATION

Select option

OCXO	Package (mm)	Supply Voltage (V)	Pulling Range	Freq. Stability (ppb)	Temp. Range (°C)	Output Logic and Symmetry		Oscillator Mode	Pin out	Lead Free	Dash	Freq. (MHz)
	L : 25.4 W : 22.1 H : 15.3	A:12.0 T:5.0 E:3.3	H: ±0.4 D: ±1.0	A: ± 5 B: ± 10 C: ± 20 E: ± 30 G: ± 50	B : 0~+50 E : 0~+70 D : -30~+70	Symmetry	50±5%	Not Selectable By Customer	N: Normal Please refer to "OUTLINE DRAWING"	F:RoHS Compliant		XX.XXXXX
					Output	J						
					CMOS 15pF	W						



Example NJEHEEJHNF-10.000000

J-TYPE; V_{DD}:3.3V; Pulling Range: ±0.4ppm; Freq. Stability: ±30ppb; Temp. Range: 0°C to +70°C; CMOS 15pF, Symmetry: 50±5%; Pin Out: Normal; RoHS Compliant; Freq. 10.000000MHz.

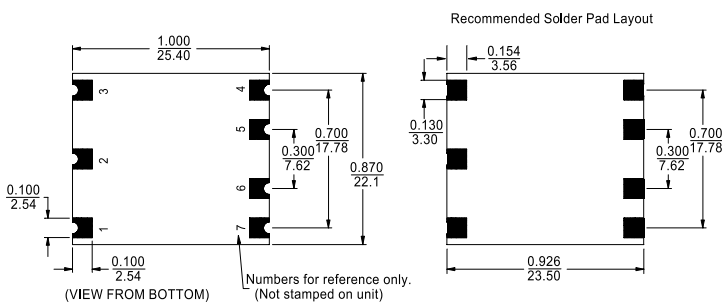
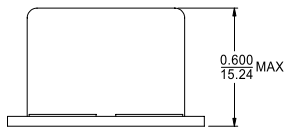
* Not all combinations of options are available.

FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C)	ppb			
	A: ±5	B: ±10	C: ±20	E: ±30
B 0 to +50	△	○	○	○
E 0 to +70	△	△	○	○
D -30 to +70	×	△	△	○

○:Standard △:Available (case by case) ×:Not available

OUTLINE DRAWING



Pin	Pin Out
1	VCO INPUT
2	REFERENCE VOLTAGE
3	+VDC
4	R.F. OUTPUT
5	NOT CONNECTED
6	0 VOLTS & CASE
7	0 VOLTS & CASE

MARK	
MODEL :	JEHEEJ
Freq. :	10.000MHz
S/N :	0000-0000
DATE :	0528

**ELECTRICAL SPECIFICATION**

	Min.	Nominal	Max.	Note	Unit
Output					
Frequency		10.00			MHz
Wave Form		CMOS			
Level "1"	2.4				V
Level "0"			0.4		
Load		15			pF
Spurious			-70		dBc
Frequency Stability					
Ambient			±30	Reference to +25°C	ppb
Operating Temperature	0		+70		°C
Aging					
At time of shipment			±1.0		ppb
After indefinite storage					
Daily			±1.0	After 30 days	ppb
Yearly			±100		
10 years			±350		
Voltage			±10	VDC ±5% change	ppb
Warm-up			±20	In 4 minutes @ +25°C (Reference to 1 Hour)	
Phase Noise @ 10 MHz					
@10 Hz			-115		dBc
@100Hz			-135		
@1 kHz			-140		
@10 kHz			-140		
Electrical Frequency Adjustment					
Range	0.4		1.0		±ppm
Control	0.0		2.8		V
Slope		Positive			
Center	1.0	1.4	1.8	Control Voltage at which nominal Frequency occurs at time of shipment	V
Input impedance	100				KΩ
Input Power					
Voltage	3.14	3.3	3.46		V
@turn on current			3.0		W
Steady state @25°C			1.0		
Reference Voltage					
Voltage	2.72	2.8	2.88		V
Load	9.0		∞		kΩ
Temperature Stability			±0.01		VDC

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

* 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 40MHz including 5.0, 10.0, 16.384, 19.44, 24.576 and 32.768 MHz.