

## NH37M28LN

High Precision Oscillator (Twin-OCXO)  
for Fixed Communication Equipment

### Main Application

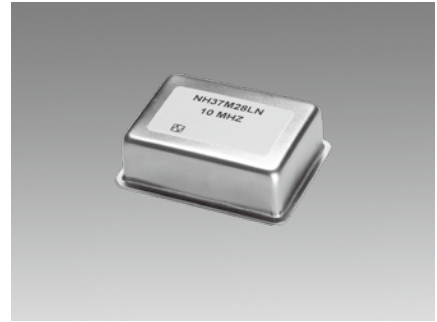
- Base stations for system mobile communications
- Measuring instrument
- Synthesizer
- Exchanger
- High-end router

### Features

- Low height and excellent temperature characteristics.
- Supports wide temperature range (-40 to +85 °C)
- Frequency adjustment by digital control method (I2C control).  
(Voltage control method ( $V_{cont}$ ) is also possible.)

Pb Free

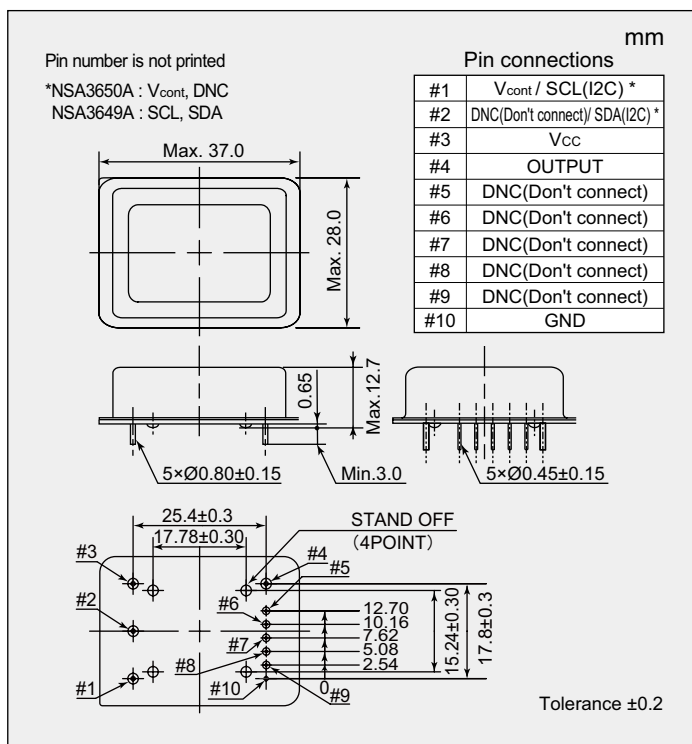
RoHS Compliant  
Directive 2011/65/EU



### Specifications

Item	Measurement condition	Model	NH37M28LN
Nominal Frequency Range (MHz)			10
Supply Voltage [V <sub>CC</sub> ] (V)			+5.0 ±5 %
Power Consumption (W)	at start		Typ. 3.0 (Max. 3.5)
	when stable (+25 °C)		Max. 1.6
Output Voltage			LVC MOS (V <sub>OL</sub> Max. 0.4 V, V <sub>OH</sub> Min. 2.4 V)
Symmetry (%)	at 1/2 V <sub>out</sub>		45 to 55
Load Impedance (pF)			15
Operating Temperature Range (°C)			-40 to +85
Storage Temperature Range (°C)			-40 to +85
Stabilization Time	Stabilization Time (Frequency Stability) within ±10 ×10 <sup>-9</sup> after power on at +25°C , based on frequency after 60minutes operation.		Max. 5 minutes
Long-term Frequency Stability	Based on frequency after 7 days operation		Max. ±0.2×10 <sup>-9</sup> /day
			Max. ±50×10 <sup>-9</sup> /year
Frequency/Temperature Characteristics			Max. ±0.5×10 <sup>-9</sup>
Frequency/Voltage Coefficient	V <sub>CC</sub> +5 V ±5 %		±0.2×10 <sup>-9</sup>
Frequency Control Range	*1		±0.3 to ±0.5×10 <sup>-6</sup>
Frequency Change Polarity	Frequency Change Polarity		Positive
	Linearity		Max. 5%

### Dimensions



### Reference Value

Phase Noise (at 10 MHz)	Offset Frequency	dBc/Hz
	1 Hz	Typ. -83
	10 Hz	Typ. -110
	100 Hz	Typ. -135
	1 kHz	Typ. -152
	10 kHz	Typ. -157
	100 kHz	Typ. -160

### \*1 Specification Number

Frequency control method	Voltage control (V <sub>cont</sub> )	Digital control (I2C control)
Control Range	0 to 5.0V	0x800000 to 0x7FFFFFFF
Specification Number	NSA3650A	NSA3649A

Please specify the model name, frequency, and specification number when you order products.  
For further questions regarding specifications, please feel free to contact us.