

## NH37M28LK

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

### Main Application

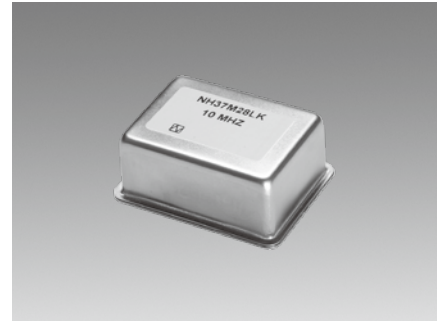
- Base stations for system mobile communications
- Synthesizer
- Exchanger
- High-end router
- Measuring instrument

### Features

- Excellent temperature characteristics.
- Supports wide temperature range. (-40 to +85°C).
- Excellent Holdover stability (Typ. 1μs/8h).
- Frequency adjustment by digital control method (I2C control).  
(Voltage control method ( $V_{cont}$ ) is also possible.)

Pb Free

RoHS Compliant  
Directive 2011/65/EU



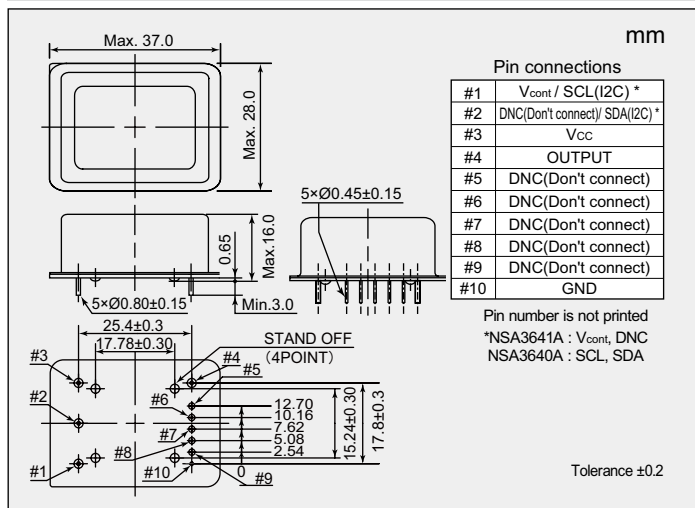
### Specifications

Item	Measurement condition	Model	NH37M28LK
Nominal Frequency (MHz)			10
Supply Voltage [ $V_{cc}$ ] (V)			+5.0 ±5 %
Power Consumption (W)	at start		Typ. 3.0 (Max. 3.5)
	when stable (+25 °C)		Max. 1.2
Output Voltage			LVC MOS ( $V_{OL}$ Max. 0.4 V, $V_{OH}$ Min. 2.4 V)
Symmetry (%)	at 1/2 $V_{out}$		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	-40 to +85 °C		Max. ±0.2 × 10 <sup>-9</sup>
Hold Over	After 7days operation, 20°C window in operating Temp. range. 8h period. *1		Typ. ±1.0μs/8h
Frequency/Voltage Coefficient	$V_{cc}$ +5 V ±5 %		Max. ±0.2 × 10 <sup>-9</sup>
Frequency Control Range	*2		±0.3 to ±0.5 × 10 <sup>-6</sup>
Frequency Change Polarity	Frequency Change Polarity		Positive
	Linearity		Max. 5%

### Reference Value

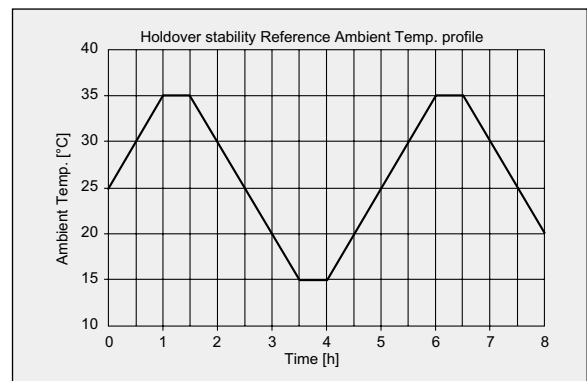
Phase Noise (at 10MHz)	Offset Frequency	dBc/Hz	Offset Frequency	dBc/Hz
	1 Hz	Typ. -83	1k Hz	Typ. -152
10 Hz	Typ. -110	10k Hz	Typ. -157	
100 Hz	Typ. -135	100k Hz	Typ. -160	

### Dimensions



### \*1 Holdover condition

- After 7days operation.
- Ramp rate: 10 °C/1h.
- Standby time: each 0.5h.
- Temp. condition Range: 20 °C window in operating Temp. range.



### \*2 Specification Number

Frequency control method	Voltage control ( $V_{cont}$ )	Digital control (I2C control)
Control Range	0 to 5.0V	0x800000 to 0x7FFFFF
Specification Number	NSA3641A	NSA3640A

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