

NH9070WA

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

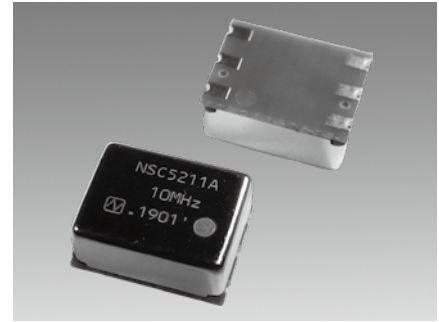
Main Application

- 5G DU (Distributed Unit) • 5G MMU (Massive MIMO Unit) • Base station equipment
- Backbone system network equipment • Relay network equipment

Features

- Compact.
- Excellent temperature characteristics.
- Excellent Long-term frequency stability.
- Excellent phase noise characteristics.
- Supports wide temperature range.
- 14×9 mm OCXO compatible and replaceable foot pattern.

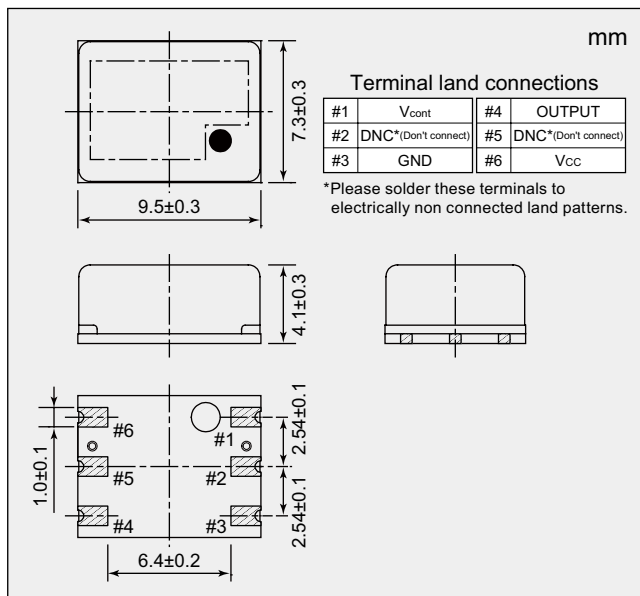
RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863



Specifications

Item	Model	NH9070WA
Nominal Frequency Range (MHz)		5 to 40
Nominal Frequency f_{nom} (MHz)		10, 12.8, 13, 19.2, 20, 25, 25.6, 30.72, 38.88
Supply Voltage V_{CC} (V)		+3.3
Load Impedance C_L (pF)		15
Operating Temperature Range T_{opr} (°C)		-40 to +85
Storage Temperature Range T_{str} (°C)		-40 to +85
Power Consumption P_{CC} (W)	at start	Max. 0.9 (Typ. 0.8)
	when stable, at +25 °C	Max. 0.5 (Typ. 0.35)
Frequency Tolerance $\Delta f/f_{nom}$	at +25°C, V_{cont} = Center, before shipment	Max. $\pm 500 \times 10^{-9}$
Frequency/Temperature Characteristics $\Delta f/f$	at Operating Temperature Range	Max. $\pm 10 \times 10^{-9}$ Max. $\pm 30 \times 10^{-9}$
Frequency/Voltage Coefficient $\Delta f/f$	$V_{CC} \pm 5\%$	Max. $\pm 10 \times 10^{-9}$ (Typ. $\pm 5 \times 10^{-9}$)
Long-term Frequency Stability $\Delta f/f$	Based on frequency after 30 days operation	Max. $\pm 5 \times 10^{-9}$ / day
		Max. $\pm 300 \times 10^{-9}$ / year
Stabilization Time (min.)	Time within specified frequency tolerance after power on at +25°C, based on frequency after 60 minutes operation.	Max. 3 / within $\pm 100 \times 10^{-9}$
Frequency Control Range (*) $\Delta f/f$		$V_{cont} = +1.5V \pm 1.3V$
		Min. $\pm 5 \times 10^{-6}$
Frequency Change Polarity		Positive
Linearity (%)		Typ. ± 1
Output Voltage		LVC MOS V_{OL} : Max. +0.3 V V_{OH} : Min. +3.0 V
Symmetry (%)	at $(V_{OH} + V_{OL}) / 2$	45 to 55
Specification Number		NSC5211A NSC5211B

Dimensions



Reference Value

Phase Noise (at 20 MHz)	Offset Frequency	dBc/Hz (typ.)
	1 Hz	-70
	10 Hz	-100
	100 Hz	-130
	1 kHz	-148
	10 kHz	-158
	100 kHz	-160
1 MHz	-163	

We offer dedicated tool (charge) for evaluation of this product

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

(*) Digital frequency control by I2C interface is available.