

Crystal oscillator for 5G

NH9070WD

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

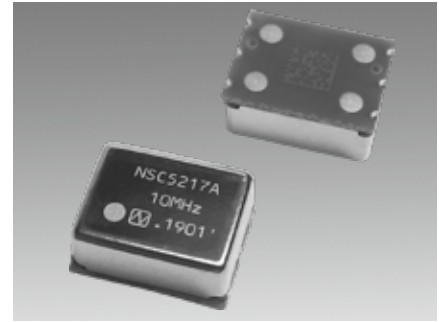
Main Application

- Base stations for system mobile communications (5G DU, 4G RRH)
- IEEE1588, Synchronous Ethernet clock (SyncE)
- Optical transmission systems Stratum 3E, 3E • GNSS-DO
- Timing and synchronous measuring equipment

Features

- Compact, with a low height.
- Supports high temperature range. (+95°C)
- Also, 14×9 mm OCXO compatible foot pattern is available by NH9070WC.

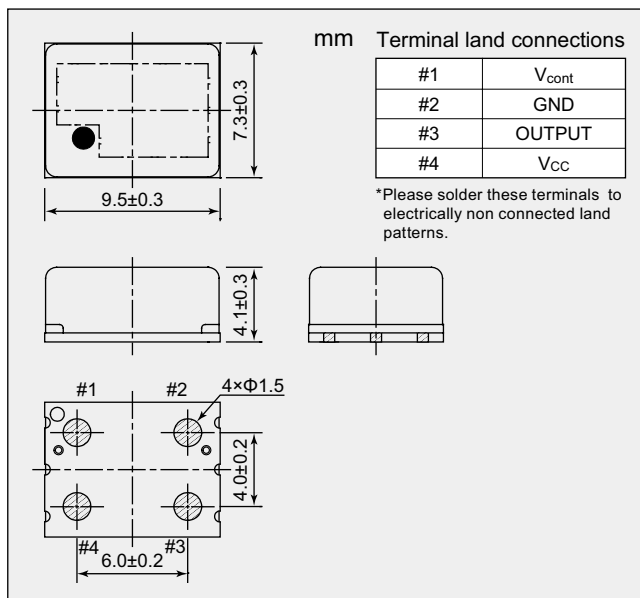
RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863



Specifications

Item	Model	NH9070WD	
Nominal Frequency f_{nom} (MHz)		20, 30.72	
Supply Voltage V_{CC} (V)		+3.3	
Load Impedance C_L (pF)		15	
Operating Temperature Range T_{opr} (°C)		-40 to +95	
Storage Temperature Range T_{str} (°C)		-40 to +95	
Power Consumption P_{CC} (W)	at start	Max. 1.5 (Typ. 1.0)	
	when stable, at +25 °C	Max. 0.6 (Typ. 0.45)	
Frequency Tolerance $\Delta f/f_{nom}$	at +25°C, V_{cont} = Center, before shipment	Max. 500×10^{-9}	
Frequency/Temperature Characteristics $\Delta f/f$	at Operating Temperature Range	Max. $\pm 20 \times 10^{-9}$	Max. $\pm 50 \times 10^{-9}$
		Frequency Temperature Slope $\Delta f/\Delta t$ (°C)	Max. $\pm 0.5 \times 10^{-9}$
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. $\pm 3 \times 10^{-9}$ / 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 60minutes operation.	Max. 3 / within $\pm 300 \times 10^{-9}$	
Frequency Control Range (*) $\Delta f/f$		$V_{cont} = +1.65V \pm 1.65V$	
		Min. $\pm 1 \times 10^{-6}$	
Frequency Change Polarity		Positive	
Output Voltage		LVCMOS V_{OL} : Max. +0.3 V V_{OH} : Min. +3.0 V	
Symmetry (%)	at $(V_{OH} + V_{OL}) / 2$	45 to 55	

Dimensions



Reference Value

Phase noise (at 20 MHz)	Offset Frequency	dBc/Hz
	1 Hz	Typ. -80
10 Hz	Typ. -115	
100 Hz	Typ. -140	
1 kHz	Typ. -152	
10 kHz	Typ. -155	
100 kHz	Typ. -155	

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

Contact Us

Standard catalog specifications are listed for the products listed.
Custom is available upon request.
Mail : 5g-sl@ndk.com