Crystal Oscillator

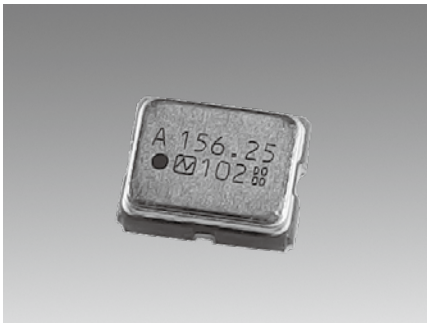
NDK Crystal Bridge to the Future

NP2520SA

Simple Packaged Crystal Oscillator (SPXO)

■ Main Application

For 5G compatible device, Optical Communication, Optical Transceiver, WDM equipment



■ Features

- Differential Output SPXO
- Compact dimension : 2.5 × 2.0 × 0.8 mm
- Supply Voltage : +2.5V or +3.3V
- Output Specification : LVPECL
- Excellent low phase jitter (Max. 100fs @156.25MHz)

Pb Free

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

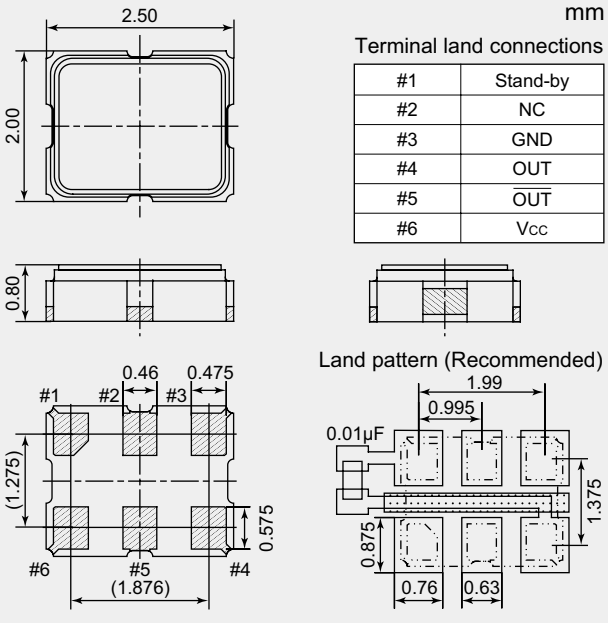
Absolute maximum rating
Supply Voltage (V_{CC}) –0.3 to +4.0 V
Storage Temperature Range –55 to +125 °C

■ Specifications

Item \ Model			NP2520SA	
Output Specification			LVPECL	
Nominal Frequency Range (MHz)			100 to 170	
Standard Frequency Range (MHz)			156.25	
Overall Frequency Tolerance *1			Max. ±50 ×10^{-6}	
Operating Temperature Range (°C)			−40 to +85	
Supply Voltage [V_{CC}] (V)			+2.5 ± 5 %	+3.3 ± 10 %
Current Consumption	Enable (mA)	+25°C	Max. 60 (STAND-BY=V_{CC} or OPEN, R_L=50Ω)	
	Stand-by (μA)	+25°C	Max. 30 (STAND-BY=GND)	
Output Voltage (V)			V_{OL} : Max. V_{CC}-1.5(DC characteristics)	
			V_{OH} : Min. V_{CC}-1.1 (DC characteristics)	
Rise Time / Fall Time (ns)			Max. 0.5 (20 to 80% Waveform)	
Symmetry (%)			45 to 55 (at 50% Waveform)	
Output Load (Ω)			50 (Terminated to V_{CC}–2.0V)	
Start-up Time (ms)			Max. 10	
Phase Jitter (fs)	+3.3V, +25°C		Max.100 (156.25MHz) (Offset Frequency : 12kHz to 20MHz)	
Specification Number			NSC5300A	NSC5300B

*1 : The frequency stability includes initial frequency tolerance, temperature variation, and supply variation.

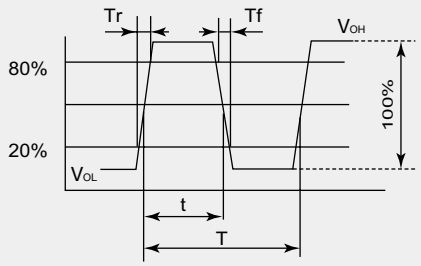
■ Dimensions



Terminal land connections

#1	Stand-by
#2	NC
#3	GND
#4	OUT
#5	$\overline{OUT}$
#6	V_{CC}

■ Output waveform



Symmetry = t/T × 100 [%]

■ Standby Function Table (Three-state)

#1 Input	#4 and #5 output
Level H (V_{IH} ≥ 0.7 V_{cc}) or OPEN	Oscillation output ON
Level L (V_{IL} ≤ 0.3 V_{cc})	High impedance

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