Crystal Oscillator

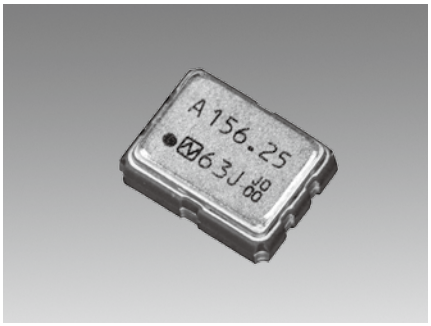
NDK Crystal Bridge to the Future

NP3225SA

Simple Packaged Crystal Oscillator (SPXO)

■ Main Application

For Base station, Optical network terminal, SONET/SDH equipment, Low-end router and Ethernet equipment



■ Features

- Differential Output SPXO
- Compact dimension : 3.2 × 2.5 × 0.9 mm
- Supply Voltage : +2.5V or +3.3V
- Output Specification : LVPECL
- Excellent low phase jitter (Typ. 90fs @156.25MHz)

Pb Free

RoHS Compliant
Directive 2011/65/EU

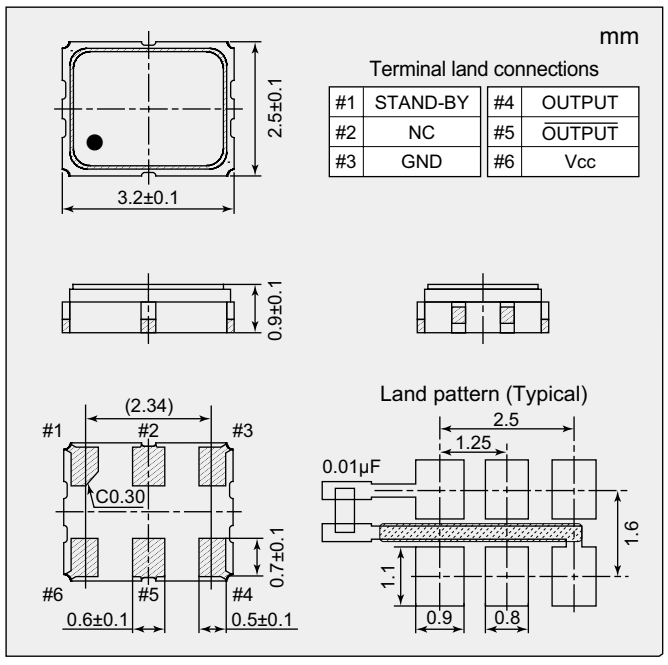
Absolute maximum rating
Supply Voltage (V_{CC}) –0.3 to +4.0 V
Storage Temperature Range –55 to +125 °C

■ Specifications

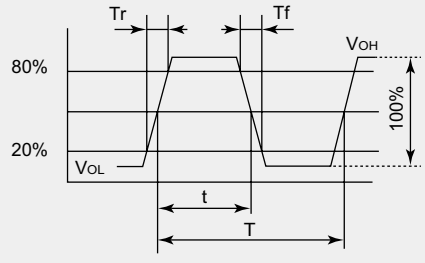
Item \ Model		NP3225SA	
Output Specification		LVPECL	
Nominal Frequency Range (MHz)		100 to 170	
Overall Frequency Tolerance *1		Max. ±50 ×10^{-6}	
Operating Temperature Range (°C)		−40 to +85	
Supply Voltage [V_{CC}] (V)		+2.5 ± 5 %	+3.3 ± 10 %
Current Consumption	Enable (mA)	Max. 60 (STAND-BY=V_{CC} or OPEN, R_L=50Ω)	
	Stand-by (μA)	Max. 15 (STAND-BY=GND)	
Output Voltage (V)		V_{OL} : V_{CC} –1.81 to V_{CC} –1.62 (DC characteristics)	
		V_{OH} : V_{CC} –1.025 to V_{CC} –0.88 (DC characteristics)	
Rise Time / Fall Time (ns)		Max. 1 (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 (ps)		Max. 1 (Offset Frequency : 12kHz to 20MHz)	
Specification Number		NSC5080A	NSC5080B

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

■ Dimensions



■ 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.