Crystal Clock Oscillator NEW

NDK Crystal Bridge to the Future

NZ1612SH

Standard Type

■ Application

For Smartphone, Wireless LAN, WiMAX, Bluetooth
For Wearable devices



■ Features

- Ultra compact and light. Dimensions : 1.6 x 1.2 x 0.6 mm, weight : 0.01 g.
- Supports low frequencies starting from 2MHz.
- Supports a wide temperature range from –40 to +125°C.
- Taped units enable automatic mounting IR Reflow (lead free) is possible.
- Lead-free.

Pb Free

RoHS Compliant
Directive 2011/65/EU

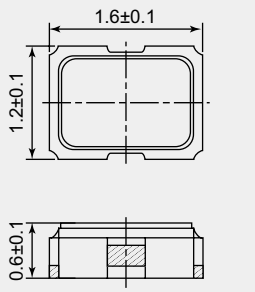
Absolute maximum rating
Supply Voltage (V_{CC}) –0.3 to +4.0 V
Storage Temperature Range –55 to +125 °C

■ Specifications

Item			Model	NZ1612SH			
Output Specification				CMOS			
Nominal Frequency Range			(MHz)	2 < F ≤ 80			
Overall Frequency Tolerance			(×10⁻⁶)	±100	±50	±50	±25
Operating Temperature Range			(°C)	–40 to +125	–40 to +105	–40 to +85	–20 to +70
Supply Voltage			(V)	+1.8 to +3.3			
Current Consumption Max.	During Operation	+25 °C	(mA)	2.5 to 9.0			
	During Standby	+25 °C	(µA)	20			
V_{OL} Max. / V_{OH} Min.			(V)	0.1 V_{CC} / 0.9 V_{CC}			
Tr Max. / Tf Max.			(ns)	6 / 6 (at 0.1 V_{CC} to 0.9 V_{CC})			
Symmetry Min. to Max.			(%)	45 to 55 (at 0.5 V_{CC})			
Load (C_L) Max.			(pF)	15			
Start-up Time Max.			(ms)	4			
Standby function				Available (Three-state)			

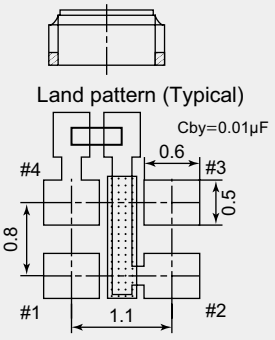
■ Dimensions

mm

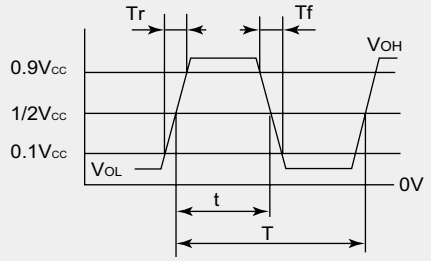


Terminal land connections

#1	STAND-BY
#2	GND
#3	OUTPUT
#4	V_{CC}



■ Output Waveform <CMOS>



Symmetry = t/T × 100 [%]

■ Standby Function

#1 Input	#3 Output
Level H (0.7 V_{CC} ≤ V_{IH} ≤ V_{CC}) or OPEN is selected.	Oscillation output ON
Level L (V_{IL} ≤ 0.3 V_{CC}) is selected.	High impedance

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Overall Frequency Tolerance	Operating Temperature Range (°C)	Supply Voltage (V)			
		+1.8±0.18	+2.5±0.25	+3.0±0.3	+3.3±0.33
± 100 × 10^{-6}	–40 to +125	NSC5152A	NSC5152B	NSC5152C	NSC5152D
± 50 × 10^{-6}	–40 to +105	NSC5103A	NSC5103B	NSC5103C	NSC5103D
± 50 × 10^{-6}	–40 to +85	NSC5101A	NSC5101B	NSC5101C	NSC5101D
± 25 × 10^{-6}	–20 to +70	NSC5100A	NSC5100B	NSC5100C	NSC5100D

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