Crystal Clock Oscillator

Crystal Bridge to the Future

NZ2520SEA — High-precision Crystal Clock Oscillator

■ Application

- WiLAN, WiMAX, Bluetooth, PLC, UWB, Car-electronics connection.

■ Features

This device is a new SPXO of hold over frequency tolerance as tight as ±15x 10^{-6}(-40 to +85°C) by building a temperature compensating circuit in it. CMOS output despite temperature compensated circuit. This device reduces harmonics level to prevent the interference with the radio frequency by the wireless communication use.

- Overall Frequency Tolerance Max. ±15×10^{-6} at -40 to +85°C.
- CMOS output
- Harmonics level reduce.
- Conventional ratio about -17dBm at Output 40MHz, V_{CC} 2.8V, 2.4GHz band.
- Supply voltage : 1.8 ± 0.09V, 2.5 ± 0.125V, 3.3 ± 0.165V. *1
- Package Size : 2.5 x 2.0 x 0.8mm

*1: Please specify one supply voltage.

Pb Free

RoHS Compliant Directive 2011/65/EU

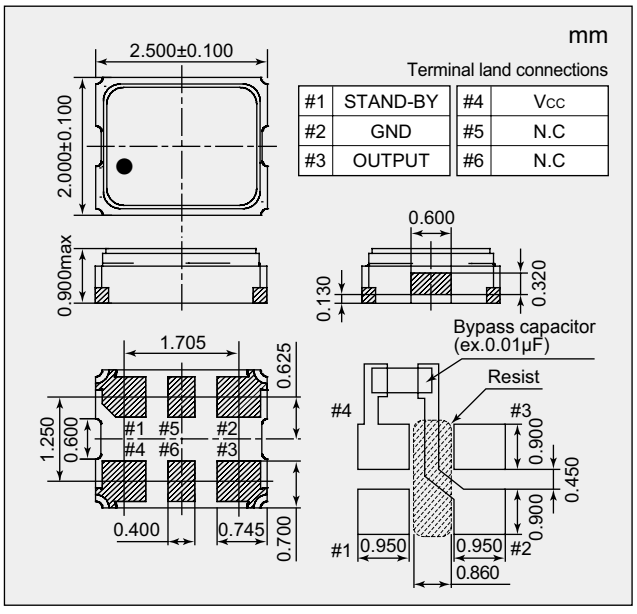
Absolute maximum rating	
Supply Voltage (V_{CC})	–0.6 to +6.0 V
Storage Temperature Range	–55 to +125 °C

■ Specifications

Item \ Model				NZ2520SEA				
Output Level				CMOS				
Nominal Frequency Range			(MHz)	2.75 ≤ F < 11	11 ≤ F < 22	22 ≤ F < 30	30 ≤ F < 40	40 ≤ F ≤ 54
Operating Temperature Range			(°C)	–40 to +85				
Overall Frequency Tolerance *2 Max.			(×10^{-6})	±15				
Current Consumption Max.	During Operation	+1.8 V, +25 °C	(mA)	3.5	4.0	4.5	5.0	6.0
		+2.5 V, +25 °C		4.0	4.5	5.0	5.5	6.5
		+3.3 V, +25 °C		4.5	5.0	5.5	6.0	8.0
	During Standby	+1.8 to +3.3 V, +25 °C	(μA)	10				
V_{OL} Max. / V_{OH} Min.			(V)	0.2 V_{CC} / 0.8 V_{CC}				
Tr Max. / Tf Max.			(ns)	5/5 (at 0.2 to 0.8V_{CC})				
Symmetry Min. to Max.			(%)	45 to 55 (at 1/2V_{CC})				
Load (C_L) Max.			(pF)	15				
Start-up Time Max.			(ms)	10				
Standby function				Available (Three-state)				

*2: Inclusive of +25°C tolerance, temp. characteristics, and supply voltage change.

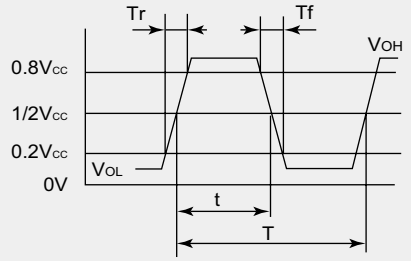
■ Dimensions



Terminal land connections

#1	STAND-BY	#4	Vcc
#2	GND	#5	N.C
#3	OUTPUT	#6	N.C

■ Output Waveform <CMOS>



Symmetry = t/T × 100 [%]

■ Standby Function

#1 Input	#3 Output
Level H (0.8 V_{CC} ≤ V_{IH} ≤ V_{CC}) or OPEN	Operating
Level L (V_{IL} ≤ 0.2 V_{CC})	High impedance

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■ Specification Number

Overall Frequency Tolerance	Operating Temperature Range(°C)	Supply Voltage (V)		
		+1.8±0.09	+2.5±0125	+3.3±0.165
±100×10^{-6}	–40 to +125	NSA3513A	NSA3513B	NSA3513C

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