CRYSTAL CLOCK OSCILLATORS
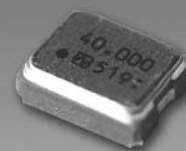
NEW

NZ2520S SERIES

■ Features

- Dimension: Ultra small crystal clock oscillators with a size of 2.5×2.0 mm.
- Thickness: Ultra thin crystal clock oscillators with a thickness of 0.9 mm.
- Weight: Realizing an ultra-light weight of 0.02 g.
- Achieving low frequency (from 1.5 MHz up) which is difficult to realize in crystal units of same size.
- Products are lead-free. These can meet the requirements of re-flow profiling using lead-free solder.
- Optimum crystal oscillators for audio, visual and computer equipments such as DVC, DSC, Note PC and PDA, etc.
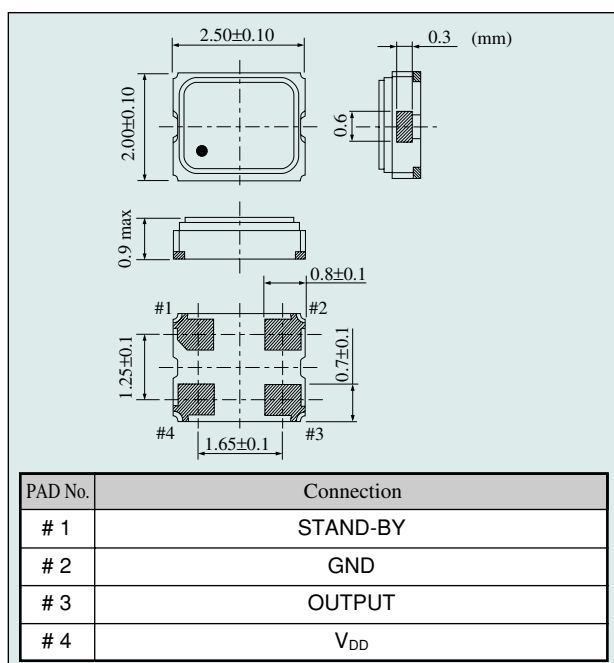
■ **Absolute Maximum Rating**
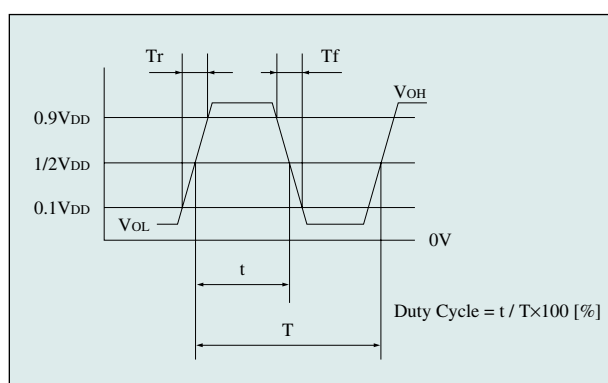Supply Voltage (V_{DD}) −0.5~+7.0V DC
Storage Temperature Range −40~+85°C

Item \\ Model		NZ2520SA						
Output Level		C-MOS						
Frequency Range	(MHz)	1.5≦F<10	10≦F<20	20≦F<30	30≦F<40	40≦F<50	50≦F<60	60≦F≦67.5
Frequency Stability / Operating Temp. Range	$(\times 10^{-6})$/(°C)	±100 / −20~+70 ±50 / −10~+70 ±30 / −10~+60						
Supply Voltage (V_{DD})	(V)	+2.5±0.1 +3.0±0.1						
Current Consumption	+2.5V, 25°C	3.5mA max	4.5mA max	6.0mA max	7.0mA max	8.0mA max	9.5mA max	10.5mA max
	+3.0V, 25°C	5.0mA max	6.0mA max	8.0mA max	9.0mA max	10.5mA max	12.0mA max	13.5mA max
	stand-by +2.5V, 25°C	10µA max						
	stand-by +3.0V, 25°C							
V_{OL} max/V_{OH} min	(V)	0.1V_{DD} / 0.9V_{DD}						
Tr max/Tf max	(ns)	5 / 5 (0.1V_{DD}~0.9V_{DD})						
Duty Cycle	(%)	45~55 (at 1/2V_{DD})						
Fanout (gate)	C_L (pF)	15						
Start-up Time	(ms)	10 (max)						
Stand-by Function	Tri-state	Yes						

■ NZ2520SA Series Outline

2.50±0.10
0.3 (mm)
2.00±0.10
0.6
0.9 max
0.8±0.1
#1 #2
1.25±0.1
0.7±0.1
#4 #3
1.65±0.1

PAD No.	Connection
# 1	STAND-BY
# 2	GND
# 3	OUTPUT
# 4	V_{DD}

■ Output Wave <C-MOS>

Duty Cycle = t / T×100 [%]

■ Stand-by Function <Tri-state>

# 1 input	# 3 output
H level (0.7V_{DD} ≦ V_{IH} ≦ V_{DD}) or open	Operating
L level (V_{IL} ≦ 0.3V_{DD})	High impedance