

# SMD Crystal Oscillators



Size: 14.0×9.6×5.4 mm

9N Series SMD Crystal Oscillators

## Features

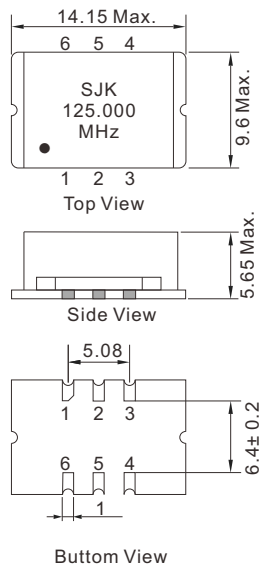
- Package size with 14×9.6×5.4mm
- Frequency range from 1MHz to 170MHz
- Low voltage operation: 1.8V~5.0V
- Either fundamental and 3rd overtone solution
- 3-state function
- Automatic mounting and reflow soldering
- Applications: Fibre channel, Ethernet, SDH, Serial ATA, SCSI, SONET, etc.
- RoHS Compliant /Pb Free



## Standard Specification

Item /Type	9N (SMD 1490 Crystal Oscillators)
Output Type	CMOS
Output Load	15pF, or specify
Supply Voltage	3.3V (1.8~5.0 V)
Frequency Range	1~170 MHz
Supply Current	50mA Max.
Frequency Stability	±20ppm, ±25ppm, or specify
Operating Temperature	-40~+85°C, or specify
Storage Temperature	-55~+125°C
Voltage Vol (Max.) /Voh (Min.)	0.1 VDD /0.9 VDD
Rise (Tr) /Fall (Tf) Time	10ns Max.
Period Jitter	40 pSec Max.
Duty Cycle	40~60%
Start-up Time	10ms Max.
Phase Jitter (12KHz~20MHz)	1ps Max.
Aging (at 25°C)	±3ppm /Year Max.
Packing Units	1000pcs. /Reel

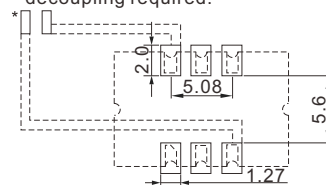
## Dimensions [mm]



### Pin Connections

Pin No.	Connection
1	OE or NC
2	OE or NC
3	GND
4	Output
5	NC
6	Vdd

\* External high frequency power supply decoupling required.



Top View Suggested Layout