

3.2 x 2.5mm CMOS TIGHT STABILITY SMD OSCILLATOR Pb-Free & RoHS compliant

N32D

FREQUENCY STABILITY

| | |
|-------------------|------------------|
| N32D4P1R•N32D4W1R | ±20ppm/-40~+85°C |
| N32D5P1R•N32D5W1R | ±15ppm/-40~+85°C |
| N32D6P1R•N32D6W1R | ±10ppm/-40~+85°C |
| N32D7P1R•N32D7W1R | ±5ppm/-40~+85°C |

OPERATING CONDITIONS

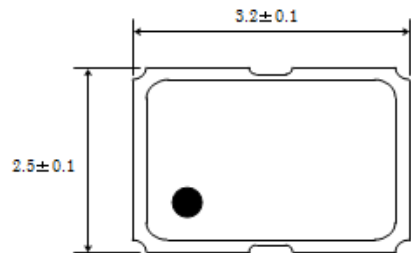
| | |
|-----------------------|------------------------------------|
| Operating Temperature | -40~+85°C |
| Storage Temperature | -55~+125°C |
| Supply Voltage | N32DW: +1.8V±5% N32DP: +3.3V±5% |

ELECTRICAL CHARACTERISTICS (Ta=25°C, Vdd=1.8V or 3.3V, CL=15pF)

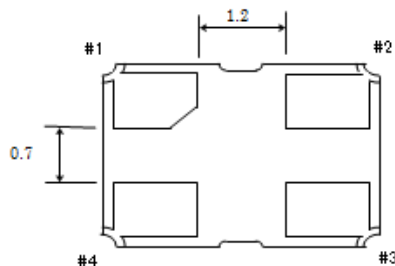
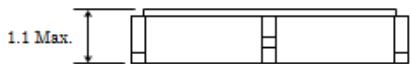
| PARAMETERS | CONDITIONS | SPECIFICATIONS |
|-----------------------|---|--------------------------|
| Frequency Range (MHz) | | 10.000~160.000 |
| Input Current (Idd) | 10.000~80.000MHz 80.000+~160.000MHz | 11mA Max. 20mA Max. |
| Frequency Stability | All conditions (Note) | ±5ppm~±20ppm |
| Symmetry | @50%Vdd | 45/55% |
| Output Voltage (Vol) | "0" Level | 10%Vdd Max. |
| Output Voltage (Voh) | "1" Level | 90%Vdd Min. |
| Rise Time (Tr) | (10% to 90%Vdd) 10.000~40.000MHz 40.000+~160.000MHz | 6.0ns Max. 3.0ns Max. |
| Fall Time (Tf) | (90% to 10%Vdd) 10.000~40.000MHz 40.000+~160.000MHz | 6.0ns Max. 3.0ns Max. |
| Output Load | HCMOS | 15pF Max. |
| Start-up Time | 0.0V to Vdd | 5ms Max. |

Note: Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change and 1st year aging.
(As for +5ppm, it is including +25°C tolerance and operating temperature range only.)

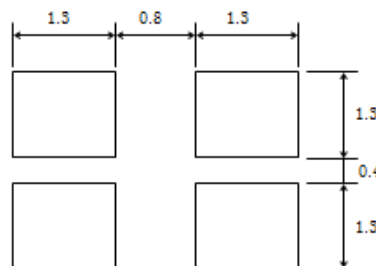
DIMENSIONS (mm)



| ENABLE/DISABLE FUNCTION | |
|-------------------------|-----------------|
| Control (Pin #1) | OUTPUT (Pin #3) |
| Open | Active |
| "1" (MH ≧ 70%VDD) | Active |
| "0" (ML ≧ 30%VDD) | High Z |



RECOMMENDED SOLDER PAD LAYOUT



| Pin Connections | |
|-----------------|-----|
| #1 | E/D |
| #2 | GND |
| #3 | OUT |
| #4 | VDD |