

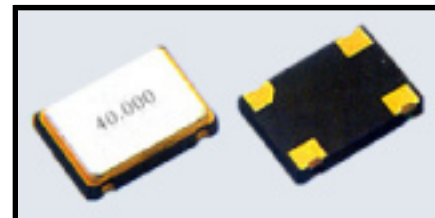
Surface Mount Clock Oscillator

N Series



Seam Sealed Ceramic 7.0 x 5.0 x 1.3 mm with Tri-State Function

(4 Pads)



Features:

- Industry standard
- Ultra small and thin ceramic package
- Suitable for reflow soldering
- Lower noise and current with reduced power consumption
- Built-in C-MOS IC with tri-state function
- Supply voltage of 1.8V, 2.5V, 3.3V and 5.0V available
- Custom specs are also available

- RoHs Compliant (Pb Free)

Electrical Specifications:

| Parameters | Condition | N1 | N2 | N3 | N5 |
|------------------------------|--------------------|---|------|------|------|
| Output Type | | CMOS | CMOS | CMOS | CMOS |
| Supply Voltage | | 1.8V | 2.5V | 3.3V | 5.0V |
| Frequency Range | | 1MHz to 170MHz | | | |
| Supply Current | | 20mA max. | | | |
| Operating Temperature | | -20°C ~ +70°C; -40°C ~ +85°C or specify | | | |
| Storage Temperature | | -55 ~ +125°C | | | |
| Frequency Stability | All Conditions | ±20ppm, ± 25ppm, or specify | | | |
| Symmetry | AT 1/2 Vdd | 40 / 60% Standard (T = 45 / 55% for tight symmetry) | | | |
| Voltage | Vol (max.) | 0.1VDD | | | |
| | Vol (min.) | 0.9VDD | | | |
| Rise / Fall Time | AT 0.1Vod - 0.9Vod | 8ns max. | | | |
| Period Jitter | | 40pSec max. | | | |
| Output Load | | 15pF | | | |
| Start-up Time | | 5 ms max. | | | |
| Phase Jitter (12KHz ~ 20MHz) | | 1ps max. | | | |
| Aging (at 25°C) | | ±3ppm / year max. | | | |

Part Numbering System:

N2 B — 25.000 B T 15

① ② ③ ④ ⑤ ⑥

① Series

| |
|----------------|
| N1: CMOS, 1.8V |
| N2: CMOS, 2.5V |
| N3: CMOS, 3.3V |
| N5: CMOS, 5.0V |

② Frequency Stability

| Frequency Stability |
|---------------------|
| A: ±100 ppm |
| B: ±50 ppm |
| D: ±25 ppm |
| E: ±20 ppm |

③ Frequency

| Frequency |
|---------------|
| Unit : MHz |
| 5 digits min. |

④ Operating Temperature

| Code | Ranges |
|------|---------------|
| B | -20°C ~ +70°C |
| X | -40°C ~ +85°C |

⑤ Output Symmetry

| Code | Output Symmetry |
|------|-----------------|
| Nil | 40% / 60% |
| T | 45% / 55% |

⑥ Output Load

| Code | Output Load |
|------|-------------|
| 15 | 15pF |

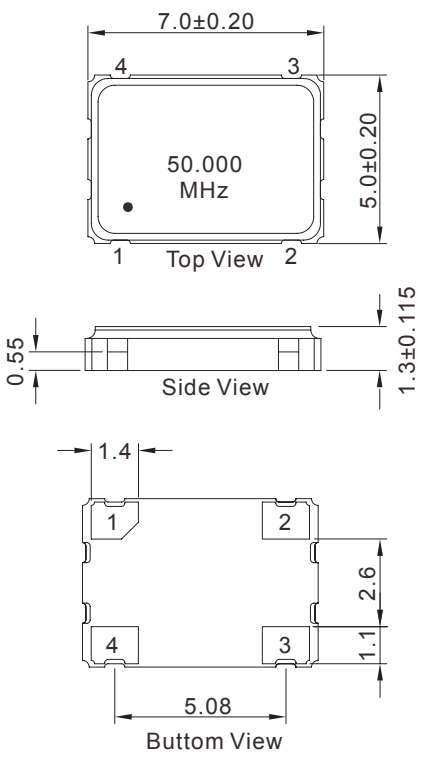
Remark: Specifications are subject to change without prior notice. Please confirm with our sales engineer.

Surface Mount Clock Oscillator **N Series**

Seam Sealed Ceramic 7.0 x 5.0 x 1.3 mm with Tri-State Function (4 Pads)

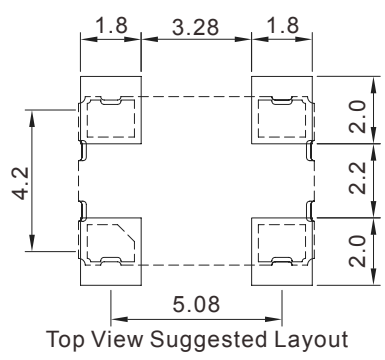


Dimensions:

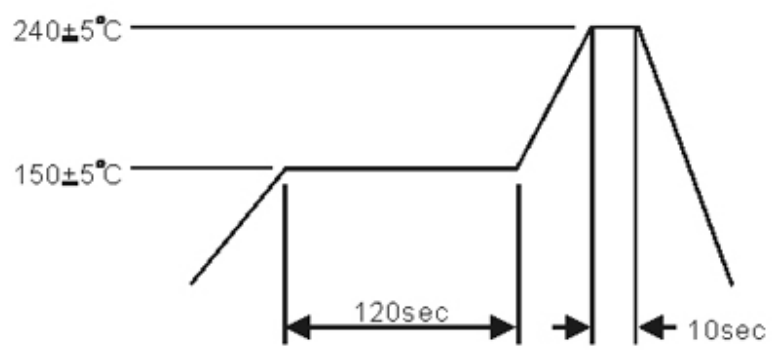


Pin Connections

| Pin No. | Connection |
|---------|--------------------|
| 1 | OE (Output Enable) |
| 2 | GND |
| 3 | Output |
| 4 | Vcc |



REFLOW CONDITION (EXAMPLE):



Total time 200sec MAX
Solder melting point 183°C

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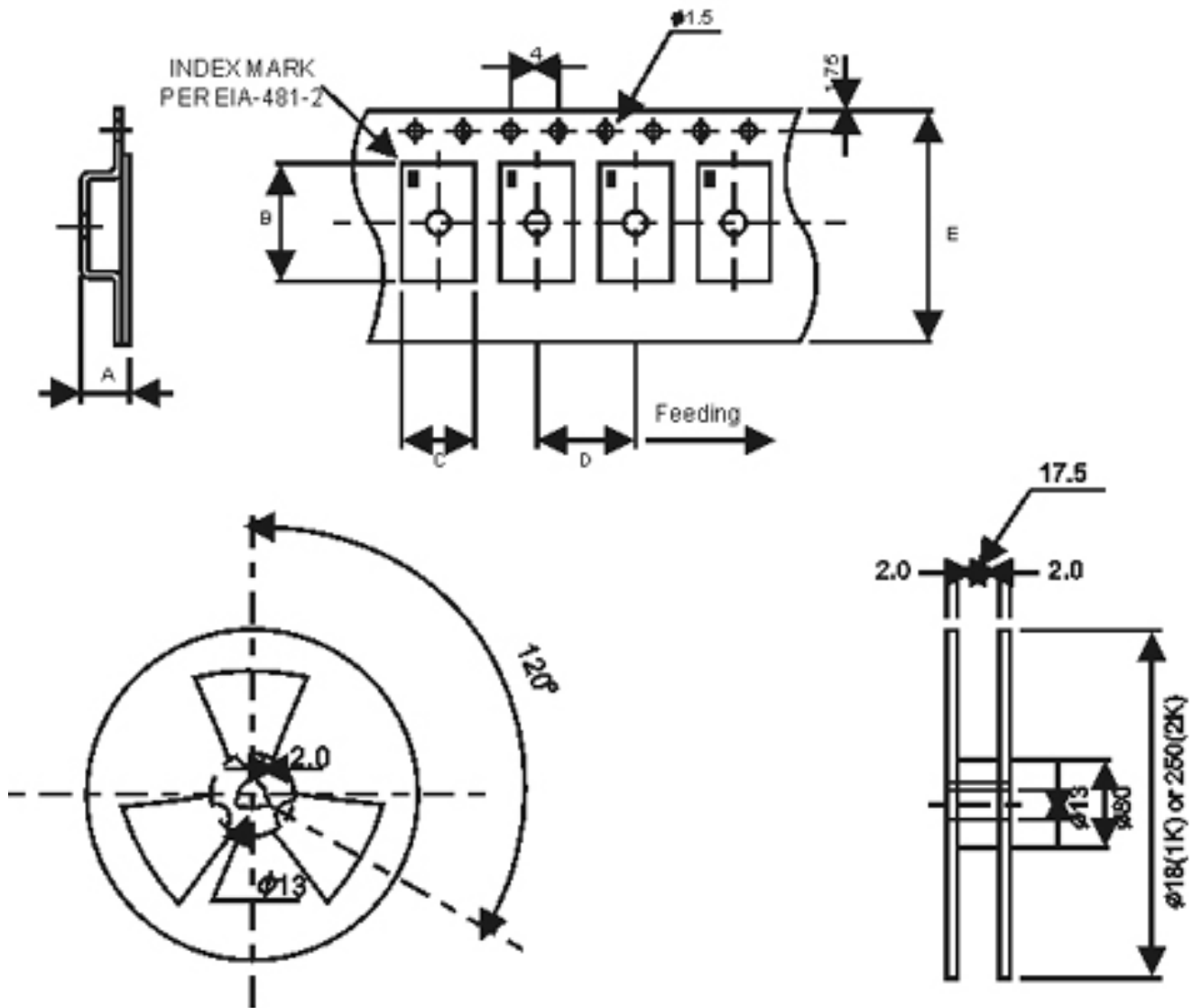
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Seam Sealed Ceramic 7.0 x 5.0 x 1.3 mm with Tri-State Function

(4 Pads)

Packing



| A | B | C | D | E | Pcs/Reel |
|-----|-----|-----|-----|----|----------|
| 1.3 | 6.4 | 3.9 | 8.0 | 16 | 1K or 2K |

REMARK:

1. 230 mm (9.05) minimum leader which consist of carrier and / or cover tape