

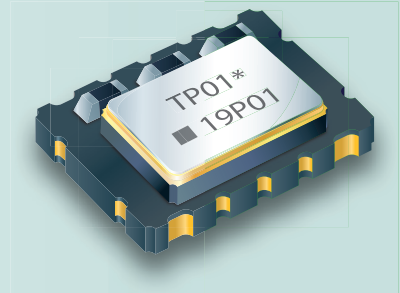
Precise SMD Temperature Compensated Crystal Oscillators

7.0 x 5.0 x 2.0 mm 7N Series (4 pad)

Oscillators Series

Features

- High Stability Over Temperature: $\pm 0.14\text{ppm} \sim \pm 0.28\text{ppm}$
- Operating Temperature Range: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
- Holdover 24Hr: $\pm 40\text{ppb}$ (Option)
- Free Run Stability for 20 years: $\pm 4.6\text{ppm}$ (Option)
- Frequency: 10 ~ 52MHz
- Supply Voltage: 2.7V ~ 5.5V
- Voltage Control Function Available
- Output Enable/Disable Function Available
- Support Clipped Sinewave and CMOS Output Waveform
- Application: Small Cell, Base Station, Networking Infrastructure
- ROHS Compliant / Pb Free



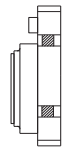
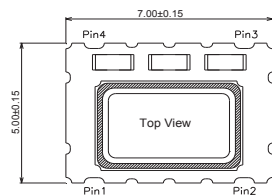
Electrical Specifications

| Item / Type | | 7N | |
|---|------------------------------------|---|---|
| Output Type | | Clipped Sinewave | CMOS |
| Output Load | | 10K Ω //10pF | 15pF |
| Output Voltage | | 0.8 Vp-p Min. | Output Low (VOL) 0.1 * Vcc Max. Output High (VOH) 0.9 * Vcc Min. |
| Supply Current | | 5 mA Max. | 10 mA Max. |
| Oscillation Mode | | Fundamental | |
| Supply Voltage | | 2.7 ~ 5.5 V | |
| Frequency Range | | 10 ~ 52 MHz | |
| Initial Frequency Tolerance at 25°C after 2 Reflows | | ± 2.0 ppm | |
| Frequency Tolerance | Vs. Temperature (- 40 ~ + 85 °C) | $\pm 0.14 / \pm 0.28$ ppm | |
| | Vs. Load (± 5 %) | ± 0.1 ppm Max. | |
| | Vs. Supply Voltage (± 5 %) | ± 0.1 ppm Max. | |
| Storage Temperature Range | | $-55 \sim +125$ °C | |
| Auto Frequency Control Range (Option) | | $\pm 5 \sim \pm 16$ ppm (1.5 \pm 1 V) | |
| Start-up Time | | 2.5 ms Max. | |
| Harmonics | | -5 dBc Max. | |
| Phase Noise at 1KHz Offset | | -130 dBc/Hz | |
| Aging | | ± 1 ppm / year Max. | |
| 24 Hr Holdover Stability (Option) [#1] | | ± 40 ppb | |
| Free Run Stability for 20 Years (Option) [#2] | | ± 4.6 ppm | |

[#1] 24 hours at constant temperature after 48 hours operation.

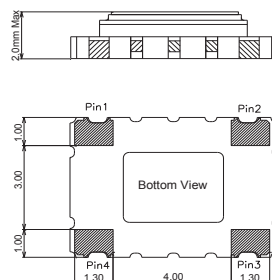
[#2] Inclusive of initial tolerance at 25°C , temperature, supply voltage $\pm 5\%$, load $\pm 5\%$, reflow soldering and ageing 20 years.

Dimensions

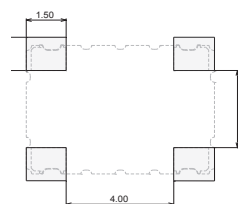


Pin Connection

| Name | Function |
|-------|------------|
| Pin 1 | AFC or GND |
| Pin 2 | GND |
| Pin 3 | OUTPUT |
| Pin 4 | VCC |



Recommended Land Pattern



Units: mm

Remark : Specification subject to change without prior notice. Please confirm with our sales. <http://www.txccorp.com>