



RoHS Compliant Standard

CLOCK OSCILLATORS

T3000 Series Clock Oscillator

Miniature, Low Profile, SMD

Features:

- ◆ Ceramic SMD package
- ◆ Tape and Reel Available
- ◆ Compatible with pick and place
- ◆ HCMOS/ TTL compatible

T3000

Model: T3000 Series Specification

| Parameter | Symbol | Unit | | | | | |
|--------------------------------|-------------|------|-----------------------------------|--------|--------|--------|------|
| Supply Voltage | V_{DD} | VDC | 5.0V | 3.3V | 2.5V | 1.8 | |
| Center Frequency | f_O | MHz | 1.00 | 1.00 | 1.00 | 1.00 | min. |
| | | MHz | 125.00 | 200.00 | 200.00 | 165.00 | max. |
| Operating Temperature Range | T | °C | see table | | | | |
| Frequency Stability | | ppm | see table | | | | |
| Supply Current | I_{DD} | | | | | | |
| | | mA | 25 | 16 | 10 | 8 | max. |
| 1MHz to 35MHz | | mA | 50 | 25 | 20 | 15 | max. |
| 35MHz to 60MHz | | mA | 60 | 40 | 30 | 25 | max. |
| 60MHz to 100MHz | | mA | 80 | 50 | 40 | 35 | max. |
| 100MHz to 106.25MHz | | mA | 80 | 50 | 40 | 35 | max. |
| 106.25MHz to 125MHz | | mA | | 65 | 51 | 37 | max. |
| 125MHz to 150MHz | | mA | | 80 | 51 | 37 | max. |
| 150MHz to 165MHz | | mA | | 75 | 58 | | max. |
| 165MHz to 200MHz | | | 10TTL/ 50TTL: 15pF/50pF CMOS | | | | |
| Load | | | | | | | |
| Output Levels | | | | | | | |
| Output High (TTL) | V_{OH} | V | 2.4 | | | | min. |
| Output High (CMOS) | V_{OH} | V | 90% | | | | min. |
| Output Low (TTL) | V_{OL} | V | 0.4 | | | | max. |
| Output Low (CMOS) | V_{OL} | V | 10% | | | | max. |
| Transition Times | T_R / T_F | | | | | | |
| | | ns | 10 | | | | max. |
| 1MHz to 35MHz | | ns | 8 | | | | max. |
| 35MHz to 60MHz | | ns | 5 | | | | max. |
| 60MHz to 100MHz | | ns | 2.5 | | | | max. |
| 100MHz to 200MHz | | | 50 ±10% standard; 50 ±5% optional | | | | |
| Output Logic | SYM | % | | | | | |
| Aging | | ppm | ±5.0ppm/ per year | | | | max. |
| Startup Time | | ms | 10 | | | | max. |
| Storage Temperature | | °C | -55 to +125 | | | | |
| Tri-State | | | | | | | |
| Output Active | Tri-State | V | | | | | |
| Output in High Impedance State | Tri-State | V | 0.8 | | | | max. |
| Period Jitter: Absolute | | ps | 100 | | | | max. |
| Period Jitter: One Sigma | | ps | 25 | | | | max. |

CLOCK OSCILLATOR: T3000 Series Surface Mount

CLOCK OSCILLATOR: T3000 Series Surface Mount

See Next Page for Table and Dimensions

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| Temperature | Stability (ppm) |
|-------------|--------------------------|
| 0 to 50°C | ±20, ±25, ±32, ±50, ±100 |
| -10 to 60°C | ±20, ±25, ±32, ±50, ±100 |
| -20 to 70°C | ±20, ±25, ±32, ±50, ±100 |
| -40 to 85°C | ±25, ±32, ±50, ±100 |

| T3000 Standard Frequencies | | | |
|----------------------------|-----------|-----------|-----------|
| 1.000000 | 10.000000 | 19.660000 | 36.864000 |
| 1.544000 | 12.000000 | 20.000000 | 37.056000 |
| 1.843200 | 12.288000 | 20.480000 | 40.000000 |
| 2.000000 | 12.352000 | 22.000000 | 44.236800 |
| 2.457600 | 14.318180 | 23.000000 | 44.732000 |
| 3.864000 | 14.745600 | 24.000000 | 49.867000 |
| 4.000000 | 15.000000 | 25.000000 | 50.000000 |
| 4.915200 | 16.000000 | 25.175000 | 55.289000 |
| 5.000000 | 16.384000 | 28.000000 | 57.600000 |
| 5.068800 | 16.660000 | 29.491000 | 64.000000 |
| 6.000000 | 17.734000 | 32.000000 | 66.000000 |
| 6.144000 | 18.432000 | 32.768000 | 66.666666 |
| 7.372800 | 19.200000 | 33.000000 | 75.000000 |
| 8.000000 | 19.620800 | 36.000000 | |

