

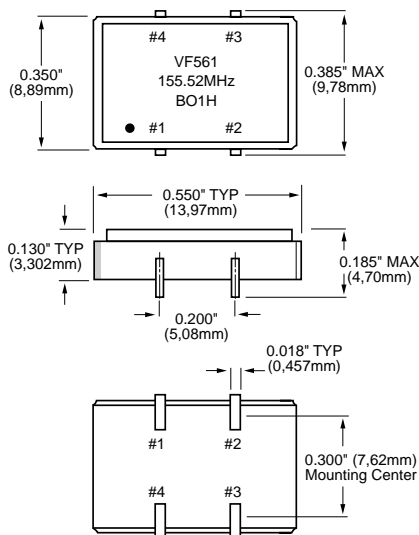
VF561

PECL Compatible Surface Mount Clock Oscillator



FEATURES

- Wide Frequency Range
- Very Low Phase Jitter
- EMI Shielded
- Tight Duty Cycle Available
- Industrial Temperature Range (-40°C to +85°C) Available
- Miniature Ceramic Package
- Industry Standard Footprint
- Complementary Output



All dimensions are typical unless otherwise specified.

Creating a Part Number

VF561 [] [] - [] - **[FREQ.]**

| FREQUENCY STABILITY | | OPERATIONAL TEMP. RANGE | |
|---------------------|-----------------|-------------------------|---------------------|
| Code | Specification | Code | Specification |
| S | ±20 ppm | | 0°C to +70°C (std.) |
| A | ±25 ppm | 1 | -40°C to +85°C |
| B | ±50 ppm | | |
| | ±100 ppm (std.) | | |
| C | ±500 ppm | | |

| DUTY CYCLE | |
|------------|---------------|
| Code | Specification |
| HH | ±2.5% |
| | ±5% (std.) |

| INPUT VOLTAGE | |
|---------------|-----------------|
| Code | Specification |
| L | 3.3 Volt |
| | 5.0 Volt (std.) |

Example: VF561AL-1-200MHz: Frequency Stability ±25ppm, Duty Cycle ±5.0%, Input Voltage 3.3 Volt ±5%, Operating Temperature -45°C to +85°C, Frequency 200.000MHz.

| | | Parameter | Symb | Condition | Min | Typ | Max | Unit | Note |
|---------------------------------|---|--|------|--|----------------------------|--------------|--------------|---------|----------------|
| Absolute Max. Ratings | Input Break Down Voltage | Vcc | | | -0.5 | | 7.0 | V | |
| | Storage Temp. | Ts | | | -55 | | +125 | °C | |
| Electrical | Frequency Range | F | | | 15 | | 300 | MHz | |
| | Frequency Stability | ΔF/F | | Overall conditions including: calibration, temp., aging 10 yrs, shock, vibration | | | ±100 | ppm | 1 |
| | Input Voltage | Vcc | | | 4.75 3.15 | 5.00 3.30 | 5.25 3.45 | V | PECL LVPECL |
| | Input Current | Icc | | 50 Ohm Load | | | 60 | mA | |
| | Load | 50 Ohm to Vcc-2V or Thevenin Equivalent, Bias Required | | | | | | | |
| | Duty Cycle | | | @ 50% output swing | 45 | 50 | 55 | % | 2 |
| | Rise/Fall Time | Tr/Tf | | 20% to 80% | | | 1.5 | ns | |
| | Logic "1" Level | Voh | | @Vcc = 5.0V @Vcc = 3.3V | 4.04 2.59 | | 4.19 2.74 | V | PECL LVPECL |
| | Logic "0" Level | Vol | | @Vcc = 5.0V @Vcc = 3.3V | 3.15 1.45 | | 3.25 1.55 | V | PECL LVPECL |
| | Start-up Time | Ts | | | | 2 | 10 | ms | |
| Phase Jitter | | | 1σ | | | 1 | ps | fj>1KHz | |
| Environmental and Mechanical | Operating Temperature Range | 0°C to +70°C (-40°C to +85°C available) | | | | | | | |
| | Mechanical Shock | Per MIL-STD-202, Method 213, Cond. E | | | | | | | |
| | Thermal Shock | Per MIL-STD-883, Method 1011, Cond. A | | | | | | | |
| | Vibration | Per MIL-STD-883, Method 2007, Cond. A | | | | | | | |
| | Soldering Conditions | 260°C, for 10s, Max or 230°C, for 90s, Max. | | | | | | | |
| Hermetic Seal | Leak rate less than 5 x 10 ⁻⁸ atm.cc/s of helium | | | | | | | | |
| Electrical Connections | Pin Out | Pin #1-Complementary Output Pin #2-Ground, Case | | | Pin #3-Output Pin#4-Vcc | | | | |

Notes:

1. Standard frequency stability (±20, ±25, ±50, others available).
2. Tighter duty cycle available.

All specifications are subject to change without notice.