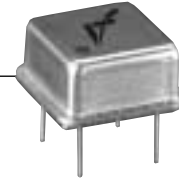


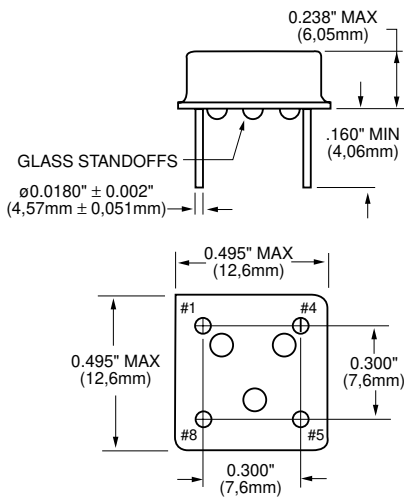
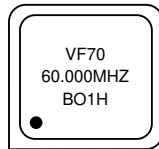
VF70



HCMOS/TTL Compatible Half Size Crystal Clock Oscillators

FEATURES

- Tristate Output Available
- Low Cost
- Industrial and Military Temperature Available
- Wide Frequency Range
- Very Low Phase Jitter



All dimensions are typical unless otherwise specified.

Creating a Part Number

VF70 [] [] [] [] - [] [] [] [] - **FREQ.**

| FREQUENCY STABILITY | |
|---------------------|-----------------|
| Code | Specification |
| S | ±20 ppm |
| A | ±25 ppm |
| B | ±50 ppm |
| | ±100 ppm (std.) |
| C | ±500 ppm |

| LEAD CONFIGURATION | |
|--------------------|---------------------|
| Code | Specification |
| GR | Gull Wing |
| G | Gull Wing |
| | Through Hole (std.) |

| DUTY CYCLE | |
|------------|---------------|
| Code | Specification |
| | ±5% |
| H | ±10% (std.) |

| OUTPUT | |
|--------|---------------|
| Code | Specification |
| T | Tristate |
| | Non-tristate |

| INPUT VOLTAGE | |
|---------------|---------------------|
| Code | Specification |
| L | 3.3 Volt ±5% |
| | 5.0 Volt ±5% (std.) |

| OPERATIONAL TEMP. RANGE | |
|-------------------------|---------------------|
| Code | Specification |
| | 0°C to +70°C (std.) |
| 1 | -40°C to +85°C |
| 2 | -55°C to +125°C* |

*Not always available

Example: VF70BL-1.8432MHz: Frequency Stability ±50ppm, Duty Cycle ±10%, Input Voltage 3.3 Volt ±5%, Operating Temperature -40°C to +85°C, Output Non-Tristate, Lead Configuration Straight, Frequency 1.8432MHz.

| Parameter | Symb | Condition | Min | Typ | Max | Unit | Note | |
|------------------------------|---------------------------------|---|--|--------------------------------|--------------|------|--------------|------------------------|
| Absolute Max. Ratings | Input Break Down Voltage | V _{cc} | -0.5 | | 7.0 | V | | |
| | Storage Temp. | T _s | -55 | | +125 | °C | | |
| Electrical | Frequency | F | 0.25 | | 100 | MHz | | |
| | Frequency Stability | ΔF/F | Overall conditions including: calibration, temp., aging 10 yrs, shock, vibration | | ±100 | ppm | 1 | |
| | Input Voltage | V _{cc} | 4.75 3.15 | 5.00 3.30 | 5.25 3.45 | V | Std. IV Opt. | |
| | Input Current | I _{cc} | No load | | 60 | mA | 2 | |
| | Load | 10 TTL gates | | | | | | |
| | Duty Cycle | | @ 1.4V | 40 | 50 | 60 | % | 3 |
| | Rise/ Fall Time | T _r / T _f | | | | 6 | ns | f > 60 MHz |
| | Logic "1" Level | V _{oh} | MAX Load | 2.4 | | | V | |
| | Logic "0" Level | V _{ol} | MAX Load | | | 0.4 | V | |
| | Start-up Time | T _s | | | 2 | 10 | ms | |
| | Phase Jitter | | 1σ | | | 1 | ps | f _j > 1 KHz |
| | Tristate Function | Input HIGH (>2.5V) or floating: ACTIVE Input LOW (<0.5V): INFINITE IMPEDANCE | | | | | | |
| Enable/ Disable Time | T _e / T _d | | | | 100 | ns | 4 | |
| Environmental and Mechanical | Operating Temperature Range | 0°C to +70°C (-40°C to +85°C, and -55°C to +125°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. | | | | | | |
| | Hermetic Seal | Leak rate less than 5 x 10 ⁻⁸ atm.cc/ s of helium | | | | | | |
| Electrical Connections | Pin Out | Pin #1-NC or Tristate Control | | Pin #4-Ground, Case Pin #8-Vcc | | | | |
| | | Pin #5-Output | | | | | | |

Notes:

1. Standard frequency stability (±20, ±25, ±50, others available).
2. Current is load and frequency dependent.
3. ±5%, duty cycle available.
4. Tristate available.

All specifications are subject to change without notice.