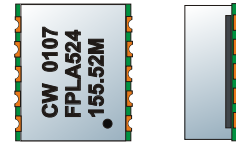


CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 3.3V LVPECL CLOCK



FPLA524

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

| PARAMETER | UNITS | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|---------------------|-------|---------|---------|---------|-------|------|
| Storage Temperature | | -40 | - | 85 | °C | |
| Supply Voltage | (Vcc) | -0.5 | - | 7.0 | Vdc | |

OPERATING SPECIFICATIONS

TABLE 2.0

| PARAMETER | | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|-----------------------------|-------|---------|---------|---------|--------|------|
| Center Frequency | (Fo) | 44.736 | - | 175 | MHz | |
| Total Frequency Tolerance | | -50 | - | 50 | ppm | 1 |
| Operating Temperature Range | | 0 | - | 70 | °C | |
| Supply Voltage | (Vcc) | 3.135 | 3.3 | 3.465 | Vdc | |
| Supply Current | (Icc) | - | - | 60 | mA | |
| Jitter (BW=10Hz to 20MHz) | | - | - | 5 | pS RMS | |
| Jitter (BW=12kHz to 20MHz) | | - | - | 1 | pS RMS | |

INPUT CHARACTERISTICS

TABLE 3.0

| PARAMETER | | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|------------------------------|-------|---------|---------|---------|-------|------|
| Disable Input Voltage (High) | (Vih) | 2.275 | - | - | Vdc | 2 |
| Enable Input Voltage (Low) | (Vil) | - | - | 1.68 | Vdc | 2 |

PECL OUTPUT CHARACTERISTICS

TABLE 4.0

| PARAMETER | | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|-----------------------------|-------|---------|---------|---------|-------|------|
| LOAD | | - | - | 50 | Ohms | 3 |
| Voltage (High) | (Voh) | 2.275 | - | - | Vdc | |
| (Low) | (Vol) | - | - | 1.68 | Vdc | |
| Duty Cycle | | 45 | 50 | 55 | % | 4 |
| Rise / Fall Time 20% to 80% | | - | - | 1 | nS | |

PACKAGE CHARACTERISTICS

TABLE 5.0

| | |
|---------|--|
| Package | Non-hermetic package consisting of an FR4 substrate with grounded metal cover. |
|---------|--|

PROCESS RECOMMENDATIONS

TABLE 6.0

| | |
|---------------|--|
| Solder Reflow | The component solder used internal to this device has a melting point of 221 C. The peak temperature inside the device should be less than or equal to 220 C for a maximum of 10 seconds |
| Wash | Ultrasonic cleaning is not recommended. |

Notes

- Includes initial tolerance, deviation over temperature, supply and load variations, shock, vibrati on and 10 years aging.
- When the oscillator is disabled, the true out put is in a low state (Vol) and the complementary output is in the high stat e (VoH).
- Output must be terminated into 50 ohms to Vcc - 2V or Thevenin equivalent.
- Duty Cycle measured at 1.977V

DESCRIPTION

The Connor-Winfield FPLA524 is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a ±50ppm overall stability. Operating at 3.3V supply voltage, the FPLA524 provides LVPECL Differential Outputs with enable/disable function.

FEATURES

- 3.3V OPERATION
- ENABLE/DISABLE
- LVPECL DIFFERENTIAL OUTPUTS
- LOW JITTER <1pS RMS
- OVERALL FREQUENCY TOLERANCE ±50PPM
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING

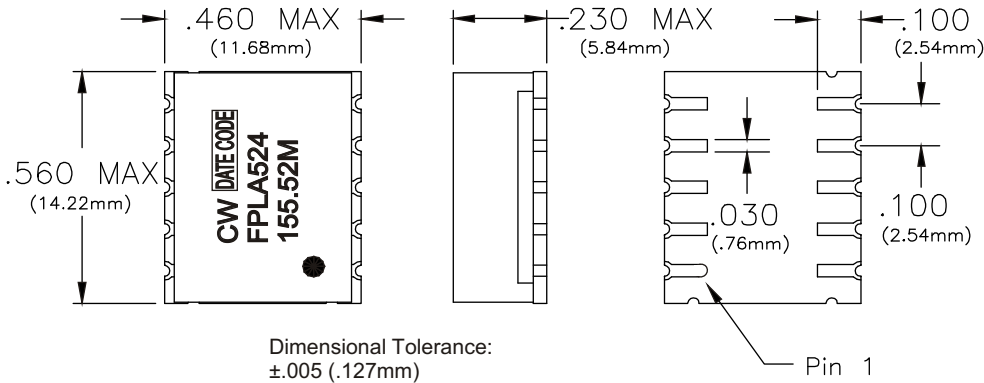
ORDERING INFORMATION

FPLA524 - 155.52MHz



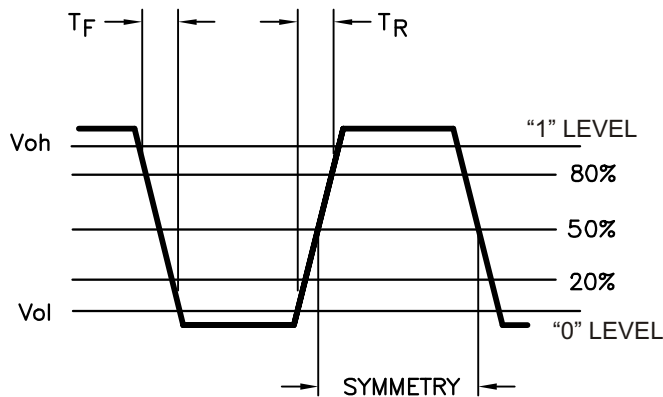
Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

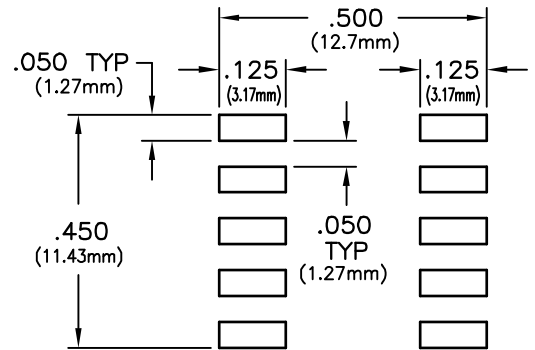


| PIN | CONNECTION |
|-----|----------------|
| 1 | N/C |
| 2 | ENABLE/DISABLE |
| 3 | N/C |
| 4 | GROUND |
| 5 | N/C |
| 6 | Q OUTPUT |
| 7 | Q OUTPUT |
| 8 | N/C |
| 9 | Vcc |
| 10 | N/C |

OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT

