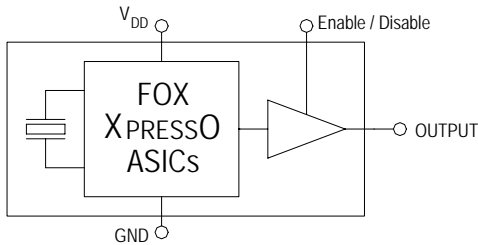


Features

- ✔ Low Jitter
- ✔ Low Cost
- ✔ Tri-State Enable / Disable Feature
- ✔ Industry Standard Package
- ✔ Gold over Nickel Termination Finish



Electrical Characteristics

| Parameters | Symbol | Condition | Maximum Value (unless otherwise noted) |
|------------------------------|------------------------------------|-------------------------------|--|
| Frequency Range | F _O | | 312.5 MHz |
| Frequency Stability 1 | | | 50 ppm |
| Temperature Range | T _O T _{STG} | Standard operating Storage | -40°C to +85°C -55°C to +125°C |
| Supply Voltage | V _{DD} | Standard | 3.3V ± 5% |
| Input Current | I _{DD} | Standard Load | 120 mA |
| Output Load | Differential | Standard | 50 ohms into V _{DD} -2.0V _{DC} |
| Start-Up Time | T _S | | 10 mS |
| Output Enable / Disable Time | | | 100 nS |
| Moisture Sensitivity Level | MSL | | 1 |
| Termination Finish | | | Au |

Note 1 – Stability is inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock and vibration.

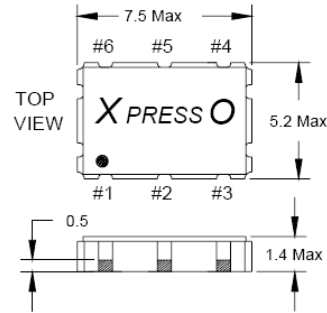
Output Wave Characteristics

| Parameters | Symbol | Condition | Maximum Value |
|----------------------------------|-----------------|------------------------------|-----------------------|
| Output LOW Voltage | V _{OL} | Standard Load | 1.35V ~ 1.65V |
| Output HIGH Voltage | V _{OH} | Standard Load | 2.055V ~ 2.405V |
| Output Symmetry | | @ 50% V _{p-p} Level | 45% ~ 55% |
| Output Enable (PIN # 1) Voltage | V _{IH} | | ≥70% V _{DD} |
| Output Disable (PIN # 1) Voltage | V _{IL} | | ≤ 30% V _{DD} |
| Cycle Rise Time | T _R | 20% ~ 80% V _{p-p} | 400 pS |
| Cycle Fall Time | T _F | 80% ~ 20% V _{p-p} | 400 pS |

DWG-100725 | Rev. 6/2/2010

LVPECL 7 x 5mm 3.3V 50ppm XO Freq: 312.5MHz

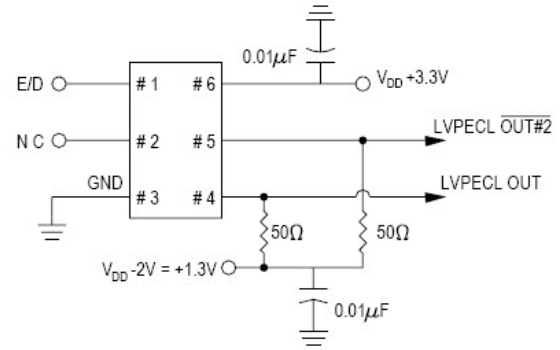
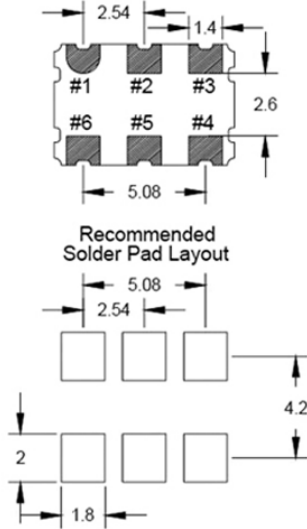
Dimensional Drawing & Pad Layout



Note: XPRESSO LVPECL XOs are designed to fit on industry standard, 6 pad, layouts.

Pin Connections
 #1) E/D #4) Output
 #2) NC #5) Output 2
 #3) GND #6) V_{DD}

Actual marking is depicted.



Drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, reference pin shape, etc. may vary

Phase Jitter & Time Interval Error (TIE) (Typical Measurements)

| Frequency | Phase Jitter (12kHz to 20MHz) | TIE (Sigma of Jitter Distribution) | Units |
|-----------|----------------------------------|---------------------------------------|--------|
| 312.5 MHz | 0.86 | 3.5 | pS RMS |

Phase Jitter is integrated from HP3048 Phase Noise Measurement System; measured directly into 50 ohm input; V_{DD} = 3.3V.

TIE was measured on LeCroy LC684 Digital Storage Scope, directly into 50 ohm input, with Amherst M1 software; V_{DD} = 3.3V.

Per *MJSQ spec (Methodologies for Jitter and Signal Quality specifications)*

Random & Deterministic Jitter Composition (Typical Measurements)

| Frequency | Random (Rj) (pS RMS) | Deterministic (Dj) (pS P-P) | Total Jitter (Tj) (14 x Rj) + Dj |
|-----------|-------------------------|--------------------------------|-------------------------------------|
| 312.5 MHz | 1.29 | 9.3 | 27.7 pS |

Rj and Dj, measured on LeCroy LC684 Digital Storage Scope, directly into 50 ohm input, with Amherst M1 software.

Per *MJSQ spec (Methodologies for Jitter and Signal Quality specifications)*

Pin Functional Description

| Pin # | Name | Type | Function |
|-------|------------------------------|--------|---|
| 1 | E / D ¹ | Logic | Enable / Disable Control of Output (0 = Disabled) |
| 2 | NC ² | | No Connection – Leave Open |
| 3 | GND | Ground | Electrical Ground for V _{DD} |
| 4 | Output | Output | LVPECL Oscillator Output |
| 5 | Output 2 | Output | Complementary LVPECL Output |
| 6 | V _{DD} ³ | Power | Power Supply Source Voltage |

NOTES:
¹ Includes pull-up resistor to V_{DD} to provide output when the pin (1) is No Connect. (Also see note 2)
² An optional pin # 2 Enable / disable is available.
³ Installation should include a 0.01µF bypass capacitor placed between V_{DD} (Pin 6) and GND (Pin 3) to minimize power supply line noise.



for **ETHERNET**

Model: FXO-PC735RGB-312

LVPECL 7 x 5mm 3.3V 50ppm XO Freq: 312.5MHz

