

PY-U Type Crystal Oscillator

FASTXO 2.5 x 2.0 mm SMD XO Frequency up to 200MHz

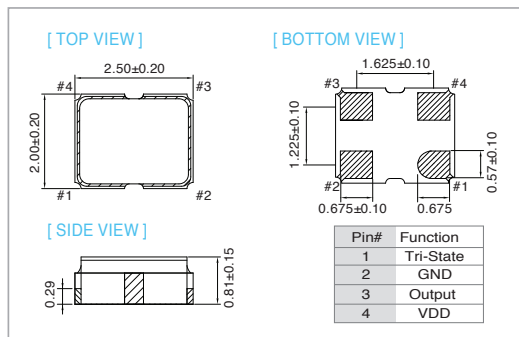
FEATURE

- Conforms to AEC-Q100
- Typical 2.5 x 2.0 x 0.81 mm ceramic SMD package
- Operation supply voltage: 1.8V, 2.5V and 3.3V
- FASTXO series, Fast delivery at any frequency
- Tri-State Enable/Disable
- Frequency Stability ± 20 ppm over -40°C to 105°C
- Pb-free/RoHS compliant

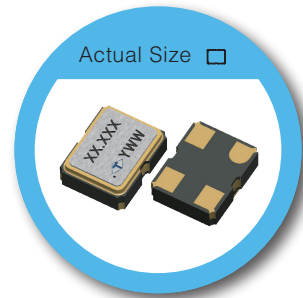
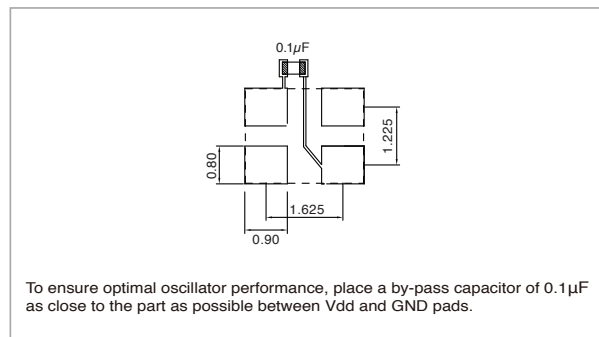
TYPICAL APPLICATION

- Computer Peripherals
- Set-top Box , HDTV
- DSC, PDA

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



RoHS Compliant

ELECTRICAL SPECIFICATION

| Parameter | 3.3V | | 2.5V | | 1.8V | | Unit | |
|---|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------|
| | Min. | Max. | Min. | Max. | Min. | Max. | | |
| Supply Voltage Variation | V _{DD} -5% | V _{DD} +5% | V _{DD} -5% | V _{DD} +5% | V _{DD} -5% | V _{DD} +5% | V | |
| Frequency Range | 1 | 200 | 1 | 200 | 1 | 125 | MHz | |
| V _{DD} Sensitivity (±5%) | -2 | 2 | -2 | 2 | -2 | 2 | ppm | |
| Supply Current (@15pf Loading) | 1MHz ≤ Fo < 30MHz | - | 27 | - | 27 | - | 25 | mA |
| | 30MHz ≤ Fo < 75MHz | - | 27 | - | 27 | - | 25 | |
| | 75MHz ≤ Fo < 125MHz | - | 30 | - | 30 | - | 25 | |
| | 125MHz ≤ Fo < 170MHz | - | 35 | - | 35 | - | - | |
| | 170MHz ≤ Fo ≤ 200MHz | - | 40 | - | 35 | - | - | |
| Output Level | Output High | 90% V _{DD} | - | 90% V _{DD} | - | 90% V _{DD} | - | V |
| | Output Low | - | 10%V _{DD} | - | 10%V _{DD} | - | 10%V _{DD} | V |
| Transition Time | 1MHz ≤ Fo < 10MHz | - | 3 | - | 4 | - | 4 | nSec |
| Rise Time / Fall Time | 10MHz ≤ Fo < 125MHz | - | 2 | - | 3 | - | 3 | |
| | 125MHz ≤ Fo < 200MHz | - | 2 | - | 2 | - | - | |
| Duty Cycle | 45 | 55 | 45 | 55 | 45 | 55 | % | |
| Startup Time | - | 8 | - | 8 | - | 8 | mSec | |
| Tri-State | Output Enable | 0.7 x V _{DD} | - | 0.7 x V _{DD} | - | 0.7 x V _{DD} | - | V |
| | Output Disable | - | 0.3 x V _{DD} | - | 0.3 x V _{DD} | - | 0.3 x V _{DD} | |
| Stand by Current (@PD Mode) | - | 400 | - | 400 | - | 400 | uA | |
| Stand by Current (@OE Mode) | - | 20 | - | 20 | - | 20 | mA | |
| Output Loading | 15 | | 15 | | 15 | | pf | |
| RMS Phase Jitter offset 12kHz to 20MHz @50MHz | Integer Mode | - | 1.5 | - | 1.5 | - | 1.5 | pSec |
| | Fractional Mode | - | 2.0 | - | 2.0 | - | 2.0 | |
| Aging (@ 25°C, First Year) | ±3 | | ±3 | | ±3 | | ppm | |
| Storage Temp. Range | -55 | 125 | -55 | 125 | -55 | 125 | °C | |

FREQ. STABILITY vs. TEMP. RANGE

| Temp. (°C) | ppm | ±15 | ±20 | ±25 | ±50 |
|------------|-----|-----|-----|-----|-----|
| -20~+70 | △ | ○ | ○ | ○ | ○ |
| -40~+85 | × | △ | ○ | ○ | ○ |
| -40~+105 | × | △ | ○ | ○ | ○ |
| -40~+125 | × | × | × | × | ○ |

*O: Available △: Conditional X: Not available
 *Inclusive of calibration @ 25 °C, operating temperature range, input Voltage variation, load variation, aging (1st year), shock, and vibration

Note: not all combination of options are available. Other specifications may be available upon request.