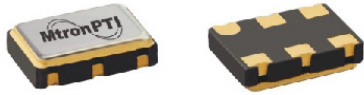
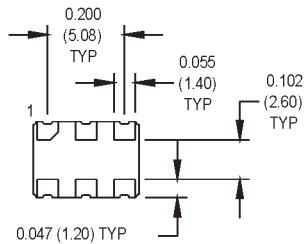
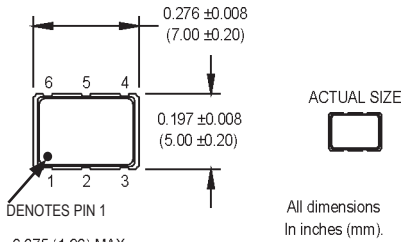


UVCJ Series

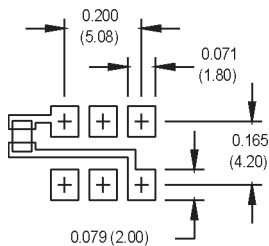
5x7 mm, 3.3 Volt, LVPECL/LVDS, Clock Oscillators



- Integrated phase jitter of less than 1 ps from 12 kHz to 20 MHz
- Ideal for 10 and 40 Gigabit Ethernet and Optical Carrier applications



SUGGESTED SOLDER PAD LAYOUT



PIN 1 ENABLE

- Pad1: Enable/Disable
- Pad2: N/C
- Pad3: Ground
- Pad4: Output Q (LVPECL, LVDS, CML)
- Pad5: Output \bar{Q} (LVPECL, LVDS, CML)
- Pad6: Vcc

PIN 2 ENABLE

- Pad1: N/C
- Pad2: Enable/Disable
- Pad3: Ground
- Pad4: Output Q (LVPECL, LVDS, CML)
- Pad5: Output \bar{Q} (LVPECL, LVDS, CML)
- Pad6: Vcc

Ordering Information

| | | | | | | | |
|--------------------------------|------------------------------|------------------------|-----------------------|-----------------------|----------------------|---|-------------|
| Product Series | UVCJ | 1 | 8 | B | L | N | 00.0000 MHz |
| Temperature Range | 1: 0°C to +70°C | 2: -40°C to +85°C | 6: -20°C to +70°C | 7: -0°C to +85°C | 8: 0°C to +50°C | | |
| Stability | 3: ±100 ppm | 4: ±50 ppm | 6: ±25 ppm | 8: ±20 ppm | | | |
| Enable/Disable | B: Enable High (pin 1) | G: Enable High (pin 2) | S: Enable Low (pin 1) | M: Enable Low (pin 2) | U: No Enable/Disable | | |
| Symmetry/Output Logic Type | L: 45/55% LVDS | P: 45/55% PECL | H: 40/60% LVDS | Q: 40/60% PECL | | | |
| Package/Lead Configurations | N: Leadless Ceramic (6 pads) | | | | | | |
| Frequency (customer specified) | | | | | | | |

M2013Sxxx - Contact factory for datasheet.

| PARAMETER | Symbol | Min. | Typ. | Max. | Units | Condition/Notes |
|--------------------------|--|--|--------------------------------------|-----------------------|--|--|
| Frequency Range | F | 0.75 | | 700 | MHz | |
| Operating Temperature | T _A | (See ordering information) | | | | |
| Storage Temperature | T _S | -55 | | +125 | °C | |
| Frequency Stability | ΔF/F | (See ordering information) | | | | |
| Aging | | | | | | See Note 1 |
| 1st Year | | -3/-5 | | +3/+5 | ppm | <52 MHz/ ≥52 MHz |
| Thereafter (per year) | | -1/-2 | | +1/-2 | ppm | <52 MHz/ ≥52 MHz |
| Input Voltage | V _{cc} | 3.135 | 3.3 | 3.465 | V | |
| Input Current | I _{cc} | | | | | |
| 0.75 to 24 MHz | | | | 70/30 | mA | PECL/LVDS |
| 24 to 700 MHz | | | | 100/60 | mA | PECL/LVDS |
| Output Type | | | | | | PECL/LVDS |
| Load | | 50 Ohms to V _{cc} - 2 VCD 100 Ohm differential load | | | | See Note 2 PECL Waveform LVDS Waveform |
| Symmetry (Duty Cycle) | | (See ordering information) | | | | @ 50% of waveform |
| Output Skew | | | | 200 | ps | PECL |
| Differential Voltage | V _{od} | 250 | 350 | 450 | mV | LVDS |
| Logic "1" Level | V _{oh} | V _{cc} -1.02 | | | V | LVPECL |
| Logic "0" Level | V _{ol} | | | V _{cc} -1.63 | V | LVPECL |
| Rise/Fall Time | T _r /T _f | | 0.35 0.50 | 0.55 1.0 | ns | @ 20/80% LVPECL @ 20/80% LVDS |
| Enable Function | | 80% V _{cc} min or N/C output active 20% V _{cc} max: output disables to high-Z | | | | Output Option B |
| | | PECL low, GND, or N/C – output active PECL high 0 output disables to high-Z | | | | Output Option S |
| Start up Time | | | | 10 | ms | |
| Phase Jitter (Typical) | ϕ _J | | 2.25 0.35 2.85 1.95 1.30 | | ps RMS ps RMS ps RMS ps RMS ps RMS | See Note 3 Integrated 12 kHz – 20 MHz Integrated 12 kHz – 20 MHz Integrated 12 kHz – 20 MHz Integrated 12 kHz – 20 MHz Integrated 12 kHz – 20 MHz |
| Environmental | | | | | | |
| Mechanical Shock | MIL-STD-202, Method 213, C (100 g's) | | | | | |
| Vibration | MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz) | | | | | |
| Thermal Cycle | MIL-STD-883, Method 1010, B (-55°C to +125°C, 15 min dwell, 10 cycles) | | | | | |
| Hermeticity | MIL-STD-202, Method 112 | | | | | |
| Solderability | Per EIAJ-STD-002 | | | | | |
| Max Soldering Conditions | See solder profile, Figure 1 | | | | | |

1. Inclusive of initial tolerance, deviation over temperature, shock, vibration, voltage and aging.
2. PECL load - see Load Circuit Diagram #5. LVDS load – see load circuit diagram #9. Consult factory with nonstandard output load requirements.
3. Consult factory for phase jitter at other specific frequencies.

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MtronPTI Lead Free Solder Profile

