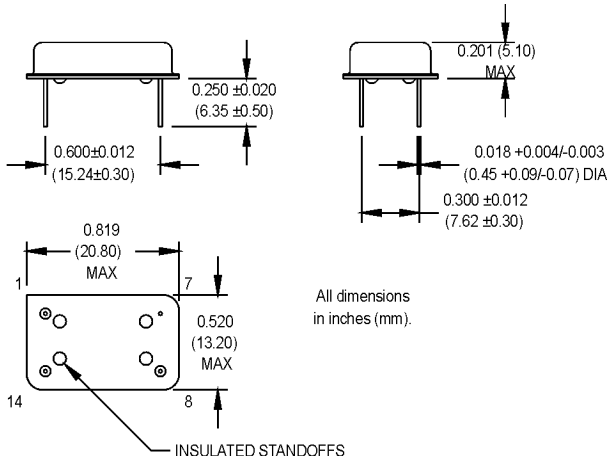


M3E Series

14 pin DIP, 3.3 Volt, ECL/PECL, Clock Oscillator



Ordering Information

| | | | | | | | | | |
|---------------------------------------|--------------------------|----|------------------------------|---|---|---|----|---------|-----|
| | M3E | 1 | 3 | X | Q | D | -R | 00.0000 | MHz |
| Product Series | | | | | | | | | |
| Temperature Range | | | | | | | | | |
| 1: | 0°C to +70°C | 2: | -40°C to +85°C | | | | | | |
| 5: | -10°C to +85°C | 6: | -20°C to +70°C | | | | | | |
| 7: | 0°C to +85°C | | | | | | | | |
| Stability | | | | | | | | | |
| 1: | ±1000 ppm | 2: | ±500 ppm | | | | | | |
| 3: | ±100 ppm | 4: | ±50 ppm | | | | | | |
| 5: | ±35 ppm | 6: | ±25 ppm | | | | | | |
| *8: | ±20 ppm | | | | | | | | |
| Output Type | | | | | | | | | |
| X: | Single Output | Z: | Dual Output | | | | | | |
| Symmetry/Logic Compatibility | | | | | | | | | |
| P: | 45/55% PECL | Q: | 40/60% PECL | | | | | | |
| Package/Lead Configurations | | | | | | | | | |
| A: | DIP; Gold Flash Header | D: | DIP; Nickel Header | | | | | | |
| G: | Gull Wing; Nickel Header | X: | Gull Wing; Gold Flash Header | | | | | | |
| RoHS Compliance | | | | | | | | | |
| Blank: | non-RoHS compliant part | | | | | | | | |
| -R: | RoHS compliant part | | | | | | | | |
| Frequency (customer specified) | | | | | | | | | |

*Contact factory for availability.

Pin Connections

| PIN | FUNCTION(S) (Model Dependent) |
|-----|-------------------------------|
| 1 | N/C, Output #2 |
| 7 | -Vee, Ground |
| 8 | Output #1 |
| 14 | +Vcc |

| | PARAMETER | Symbol | Min. | Typ. | Max. | Units | Condition | |
|---------------------------|-----------------------|---|--|------|-----------------------|--------|------------|------------------------------|
| Electrical Specifications | Frequency Range | F | 1.5 | | 155.52 | MHz | | |
| | Frequency Stability | $\Delta F/F$ | (See Ordering Information) | | | | | See Note 1 |
| | Operating Temperature | T _A | (See Ordering Information) | | | | | |
| | Storage Temperature | T _s | -55 | | +125 | °C | | |
| | Input Voltage | V _{cc} | 3.15 | 3.3 | 3.45 | V | | |
| | Input Current | I _{ee} /I _{cc} | | | 100 | mA | | |
| | Symmetry (Duty Cycle) | | (See Ordering Information) | | | | | V _{cc} -1.3 V level |
| | Load | | 50 Ω to V _{cc} -2V or Thevenin Equivalent | | | | | See Note 2 |
| | Rise/Fall Time | T _r /T _f | | | 2.5 | ns | See Note 3 | |
| | Logic "1" Level | V _{oh} | V _{cc} -1.02 | | | V | | |
| | Logic "0" Level | V _{ol} | | | V _{cc} -1.63 | V | | |
| | Cycle to Cycle Jitter | | | 13 | 25 | ps RMS | 1 Sigma | |
| | Environmental | Mechanical Shock | Per MIL-STD-202, Method 213, Condition C | | | | | |
| Vibration | | Per MIL-STD-202, Method 201 & 204 | | | | | | |
| Wave Solder Conditions | | 260°C for 10 s max. | | | | | | |
| Hermeticity | | Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm.cc/s of helium) | | | | | | |
| Solderability | | Per EIAJ-STD-002 | | | | | | |

1. Calibration, deviation over temperature, shock, vibration, and aging.
2. Internally terminated outputs. See load circuit diagram #5.
3. Rise/Fall times are measured between V_{cc} -1.02 V and V_{cc} -1.63 V.

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