

M3A & MAH Series

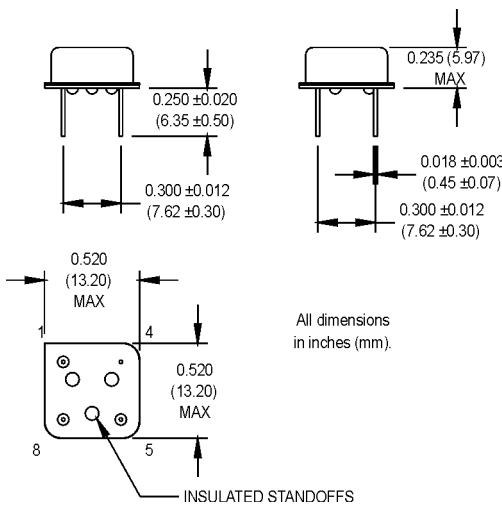
8 pin DIP, 5.0 or 3.3 Volt, AC MOS/TTL, Clock Oscillators



Ordering Information

| | | | | | | | | | |
|---------------------------------------|--|---|---|---|---|---|----|---------|-----|
| | M3A/MAH | 1 | 3 | F | A | D | -R | 00.0000 | MHz |
| Product Series | M3A = 3.3 Volt MAH = 5.0 Volt | | | | | | | | |
| 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 | | | | | | | | |
| Stability | 1: ±1000 ppm 2: ±500 ppm 3: ±100 ppm 4: ±50 ppm 5: ±35 ppm 6: ±25 ppm *8: ±20 ppm | | | | | | | | |
| Output Type | F: Fixed T: Tristate | | | | | | | | |
| Symmetry/Logic Compatibility | A: 40/60 AC MOS/TTL B: 45/55 TTL C: 45/55 AC MOS | | | | | | | | |
| 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 |
|-----|---------------------|
| 1 | N/C or Tri-state |
| 4 | Circuit/Case Ground |
| 5 | Output |
| 8 | +Vdd |

| PARAMETER | Symbol | Min. | Typ. | Max. | Units | Condition |
|-----------------------|------------------------|---|------|---------------------|--------|-------------|
| Frequency Range | F | 30 | | 133 | MHz | |
| Frequency Stability | $\Delta F/F$ | (See Ordering Information) | | | | |
| Operating Temperature | T _A | (See Ordering Information) | | | | |
| Storage Temperature | T _s | -55 | | +125 | °C | |
| Input Voltage | V _{dd} | 3.135 | 3.3 | 3.465 | V | M3A |
| | | 4.75 | 5.0 | 5.25 | V | MAH |
| Input Current | I _{dd} | | 30 | 50 | mA | M3A |
| | | | 70 | 90 | mA | MAH |
| Symmetry (Duty Cycle) | | (See Ordering Information) | | | | |
| Load | | | | 50 | Ω | See Note 2 |
| Rise/Fall Time | Tr/Tf | | | | | |
| M3A | | | 1 | 2.5 | ns | See Note 3 |
| MAH | | | | 2 | ns | See Note 3 |
| Logic "1" Level | V _{oh} | 90% V _{dd} | | | V | AC MOS Load |
| | | V _{dd} -0.5 | | | V | TTL Load |
| Logic "0" Level | V _{ol} | | | 10% V _{dd} | V | AC MOS Load |
| | | | | 0.5 | V | TTL Load |
| Cycle to Cycle Jitter | | | 5 | 15 | ps RMS | 1 Sigma |
| Tri-State Function | | Input Logic "1" or floating; output active Input Logic "0"; output to high-Z | | | | |
| Environmental | Mechanical Shock | Per MIL-STD-202, Method 213, Condition C | | | | |
| | Vibration | Per MIL-STD-202, Method 201 & 204 | | | | |
| | Wave Solder Conditions | See page 147 | | | | |
| | Hermeticity | Per MIL-STD-202, Method 112 (1 x 10 ⁻⁵ atm.cc/s of helium) | | | | |
| | Solderability | Per EIAJ-STD-002 | | | | |

1. Symmetry is measured at 1.4 V with TTL load, and at 50% V_{dd} with AC MOS load.
2. See load circuit diagram #6.
3. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% V_{dd} and 90% V_{dd} with AC MOS load.

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