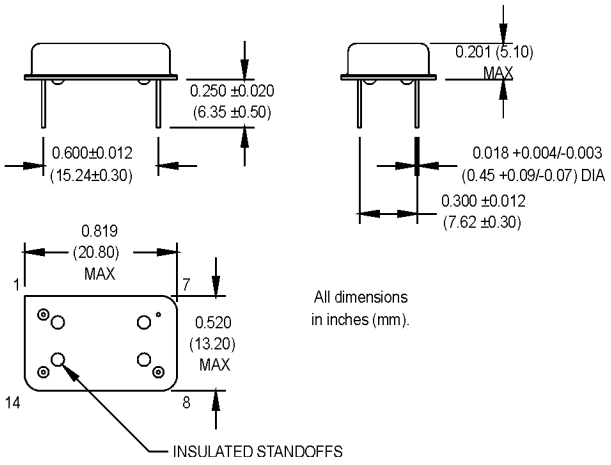
M3E Series
14 pin DIP, 3.3 Volt, ECL/PECL, Clock Oscillator



All dimensions in inches (mm).

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°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	ΔF/F	(See Ordering Information)				See Note 1
	Operating Temperature	TA	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Input Voltage	Vcc	3.15	3.3	3.45	V	
	Input Current	Iee/Icc			100	mA	
	Symmetry (Duty Cycle)		(See Ordering Information)				Vcc -1.3 V level
	Load		50 Ω to Vcc -2V or Thevenin Equivalent				See Note 2
	Rise/Fall Time	Tr/Tf			2.5	ns	See Note 3
	Logic "1" Level	Voh	Vcc -1.02			V	
	Logic "0" Level	Vol			Vcc -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 Vcc -1.02 V and Vcc -1.63 V.