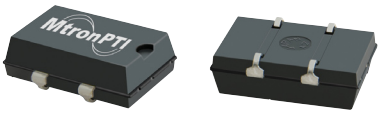
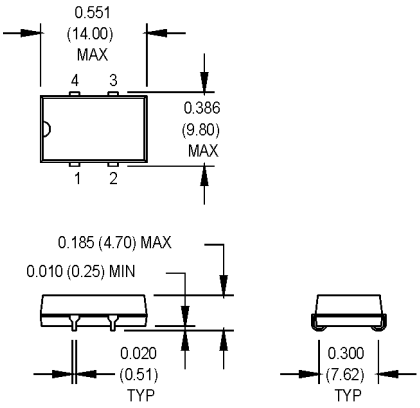
M3R Series

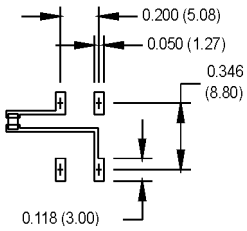
9x14 mm, 3.3 Volt, HCMOS/TTL, Clock Oscillator



This product is not recommended for new designs



SUGGESTED SOLDER PAD LAYOUT



NOTE: A capacitor of value 0.01 µF or greater between Vdd and Ground is recommended.

Ordering Information

M3R 1 3 F A J 00.0000 MHz

- **Product Series**
- **Temperature Range**
  - 1: 0°C to +70°C
  - 2: -40°C to +85°C
  - 6: -20°C to +70°C
- **Stability**
  - 3: ±100 ppm 4: ±50 ppm
  - 6: ±25 ppm*
- **Output Type**
  - F: Fixed T: Tristate
- **Symmetry/Logic Compatibility**
  - A: 40/60 TTL/HCMOS C: 45/55 HCMOS
- **Package/Lead Configurations**
  - J: J Lead
- **Frequency (customer specified)**

*0°C to 70°C only
M2008Sxxx - Contact factory for datasheet.

Pin Connections

PIN	FUNCTION
1	N/C or Tristate
2	Ground
3	Output
4	+Vdd

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Electrical Specifications	Frequency Range	F	1		80	MHz	
	Operating Temperature	TA	(See ordering information)				
	Storage Temperature	TS	-55		+125	°C	
	Frequency Stability	ΔF/F	(See ordering information)				
	Aging 1st Year Thereafter (per year)		 -5 -5		 +5 +5	 ppm ppm	
	Input Voltage	Vdd	3.0	3.3	3.6	V	
	Input Current	Idd			15 20 40	mA mA mA	1.000 to 27.000 MHz 27.001 to 50.000 MHz 50.001 to 80.000 MHz
	Output Type						HCMOS/TTL
	Load				15	pF	See Note 1
	Symmetry (Duty Cycle)		(See ordering information)				50% Vdd level
	Logic "1" Level	Voh	90% Vdd			V	HCMOS Load
	Logic "0" Level	Vol			10% Vdd	V	HCMOS Load
	Output Current				±4	mA	
	Rise/Fall Time	Tr/Tf			8	ns	See Note 2
	Tristate Function		Input Logic "1" or floating: output active Input Logic "0": output disables to high-Z				
	Start up Time				10	ms	
	Random Jitter	Rj		5	12	ps RMS	1-Sigma
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. HCMOS load - see Load Circuit Diagram #2.
2. Rise/Fall times are measured between 10% Vdd and 90% Vdd with HCMOS load.
3. TTL output drive capability is 2 TTL (10 LS-TTL)

MtronPTI Lead Free Solder Profile