M8R Series

9x16 mm, 3.3 Volt, HCMOS/TTL, Clock Oscillator

RoHS Compliant

These are non-PLL based high frequency oscillators intended for applications that require low phase jitter. For frequencies 80.000 MHz and below, please see the M8S series.

Ordering Information

M8R 1 3 F A J -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
- **F:** Fixed
- **T:** Tristate

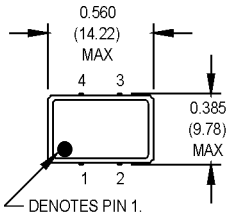
Symmetry/Logic Compatibility
- **A:** 40/60 CMOS/TTL
- **C:** 45/55 CMOS

Package/Lead Configurations
- **J:** J Lead (Gold Flash Leads)

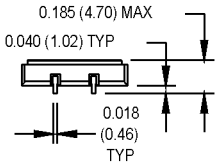
RoHS Compliance
- **Blank:** non-RoHS compliant part
- **-R:** RoHS compliant part

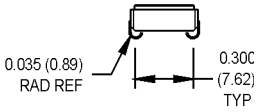
Frequency (customer specified)

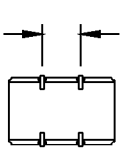
*Consult Factory for availability



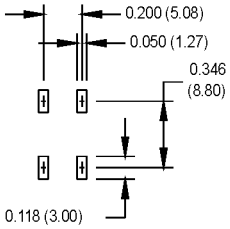
All dimensions in inches (mm).







SUGGESTED SOLDER PAD LAYOUT



Pin Connections

PIN	FUNCTION
1	N/C or Tri-state
2	Ground
3	Output
4	+Vdd

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	80.001		125	MHz	
	Frequency Stability	ΔF/F	(See Ordering Information)				
	Operating Temperature	TA	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Input Voltage	Vdd	3.15	3.3	3.45	V	
	Input Current	Idd			50	mA	
	Symmetry (Duty Cycle)		(See Ordering Information)				See Note 1
	Load		2 TTL or 15 pF				See Note 2
	Rise/Fall Time	Tr/Tf			4	ns	See Note 3
	Logic "1" Level	Voh	90% Vdd Vdd -0.5			V V	HCMOS load TTL load
	Logic "0" Level	Vol			10% Vdd 0.5	V V	HCMOS load TTL load
	Cycle to Cycle Jitter			5	20	ps RMS	1 Sigma
	Tri-state Function		Pin 1 logic "1" or floating; output active Pin 1 logic "0"; output disables to high-Z				
Environmental	Mechanical Shock		Per MIL-STD-202, Method 213, Condition C				
	Vibration		Per MIL-STD-202, Method 201 & 204				
	Reflow Solder Conditions		240°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. Symmetry is measured at 1.4 V with TTL load, and at 50% Vdd with HCMOS load.
2. TTL load - see load circuit diagram #1. HCMOS load - see load circuit diagram #2.
3. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% Vdd and 90% Vdd with HCMOS load