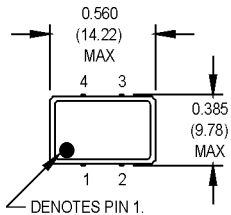


M8R Series

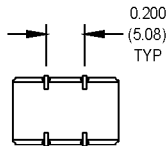
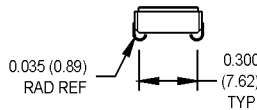
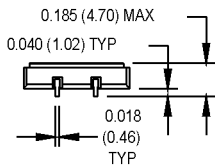
9x16 mm, 3.3 Volt, HCMOS/TTL, Clock Oscillator



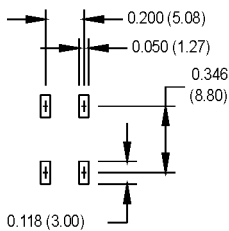
These are non-PLL based high frequency oscillators intended for applications that require low phase jitter. For frequencies 80.000 MHz and below, please see the M8S series.



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

Ordering Information

Product Series	M8R	1	3	F	A	J	-R	00.0000	MHz		
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

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
Electrical Specifications	Frequency Range	F	80.001		125	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}	3.15	3.3	3.45	V		
	Input Current	I _{dd}			50	mA		
	Symmetry (Duty Cycle)		(See Ordering Information)					See Note 1
	Load		2 TTL or 15 pF					See Note 2
	Rise/Fall Time	T _r /T _f			4	ns	See Note 3	
	Logic "1" Level	V _{oh}	90% V _{dd}			V	HCMOS load	
		V _{oh}	V _{dd} - 0.5			V	TTL load	
	Logic "0" Level	V _{ol}			10% V _{dd}	V	HCMOS load	
		V _{ol}			0.5	V	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% V_{dd} 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% V_{dd} and 90% V_{dd} with HCMOS load