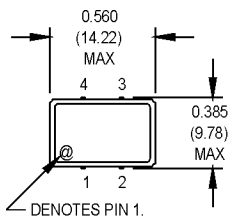


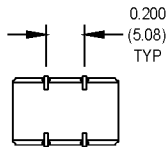
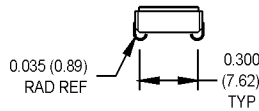
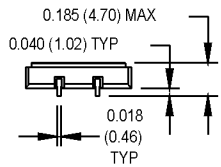
M7R Series 5.0 Volt HCMOS/TTL Compatible Surface Mount Oscillators



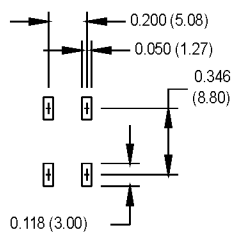
These are non-PLL based high frequency oscillators intended for applications that require low phase jitter. For frequencies 80.000 MHz and below, please see the M7S series.



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

00.0000 MHz

M7R 1 3 F A J

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)

Frequency (customer specified) ————

*Consult factory for availability.

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
	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}	4.5	5.0	5.5	V		
	Input Current	I _{dd}			90	mA		
	Symmetry (Duty Cycle)		(See Ordering Information)					See Note 1
	Load		10 TTL or 15 pF					See Note 2
	Rise/Fall Time	Tr/Tf			5	ns	See Note 3	
	Logic "1" Level	V _{oh}	90% V _{dd}			V	HCMOS load	
			V _{dd} -0.5			V	TTL load	
	Logic "0" Level	V _{ol}			10% V _{dd}	V	HCMOS load	
				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 ⁻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 HCMOS load.
2. TTL load - See load circuit diagram #1 on page 92. HCMOS load - See load circuit diagram #2 on page 92.
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.

M-tron reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of such product.

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