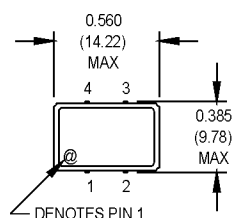


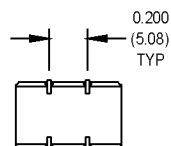
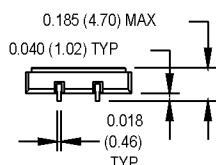
M7R Series 5.0 Volt HCMOS/TTL Compatible Surface Mount Oscillators



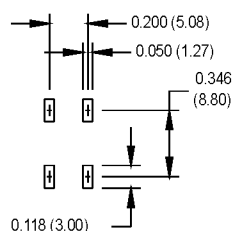
These are non-PLL based high frequency oscillators intended for applications that require low phase jitter. For frequencies 80.000 MHz and below, please see the M7S series.



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

Product Series	M7R	1	3	F	A	J	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)						
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 _{dd} -0.5			V V	HCMOS load TTL load
	Logic “0” Level	V _{ol}			10% V _{dd} 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% 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.

M-tron Industries, Inc., PO Box 630, Yankton, SD 57078-0630, USA Phone: 605-665-9321 or 1-800-762-8800 Fax: 605-665-1709 Website: www.mtron.com
M-tron Industries Limited, 1104 Shanghai Industrial Investment Building, 48-62 Hennessy Road, Wanchai, Hong Kong, China Phone: 852-2866-8023 Fax: 852-2529-1822