

M1S Series 5.0 Volt HCMOS/TTL Compatible Oscillators

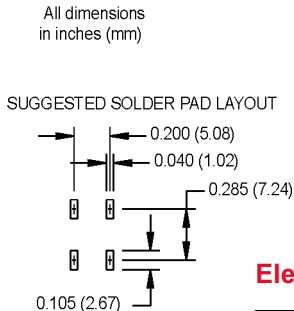
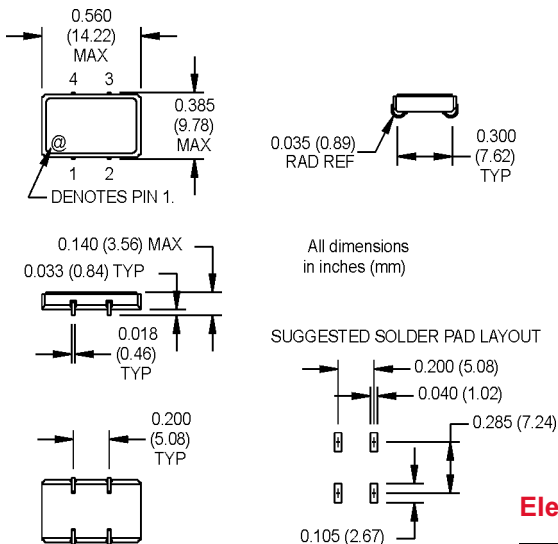


M1S Series 5.0 Volt HCMOS/TTL Compatible Ceramic Package Surface Mount Oscillators

Features grounded lid for reduced EMI.
This product is available in both 5.0 V (M1S) and 3.3 V (M2S).

RECOMMENDATION:

Unless board height (.185 vs. .140) is a concern, M-tron recommends the M7S series. See page 79.



Pin Connections

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

Tri-state Control Logic

Pin 1 high or floating: clock signal output.
Pin 1 low: output disabled to high impedance.

Ordering Information

Product Series	M1S	1	3	F	A	J	00.0000 MHz
Temperature Range	1: 0°C to +70°C	2: -40°C to +85°C	3: -55°C to +105°C	4: -55°C to +125°C	5: -10°C to +85°C	6: -20°C to +70°C	
Stability	1: ±1000 ppm	2: ±500 ppm	3: ±100 ppm	4: ±50 ppm	5: ±35 ppm	6: ±25 ppm	
Output Type	F: Fixed	T: Tristate					
Symmetry/Logic Compatibility	A: 40/60 CMOS/TTL	B: 45/55 TTL	C: 45/55 CMOS	D: 45/55 CMOS/TTL			
Package/Lead Configurations	J: J Lead						
Frequency (customer specified)							

Available Stabilities vs. Temperature

T \ S	1	2	3	4	5	6	8
1	A	A	S	A	A	A	A
2	A	A	A	A	A	A	C
3	A	A	A	C	N	N	N
4	A	A	A	C	N	N	N
5	A	A	A	A	A	A	C
6	A	A	A	A	A	A	C
7	A	A	A	A	A	A	C

A = Available
N = Not Available
S = Standard
C = Consult Factory

Electrical Specifications

Standard Operating Conditions • 0°C to +70°C; Vdd = 5.0 ±10% VDC					
PARAMETERS	TTL Load		HCMOS Load		UNITS
	MIN.	MAX.	MIN.	MAX.	
Frequency Range	1.000	80.000	1.000	80.000	MHz
Output Load ¹		10		50	TTL/pF
Symmetry ²	40/60	60/40	40/60	60/40	%
Logic "0" Level		0.5		10% Vdd	V
Logic "1" Level	Vdd-0.5		90% Vdd		V
Rise/Fall Time ³					
1.000 to 40.000 MHz		4		7	nS
40.001 to 80.000 MHz		3		5	nS
Supply Current		60		85	mA

¹ TTL load - See load circuit diagram #1 on page 137. HCMOS load - See load circuit diagram #2 on page 137.

² Symmetry is measured at 1.4 V with TTL load and at 50% Vdd with HCMOS load.

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.

See page 136, Figure *2* for suggested solder profile.

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