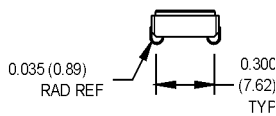
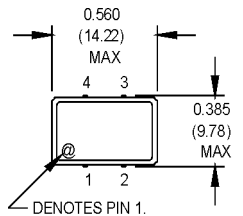


M7S & M8S Series

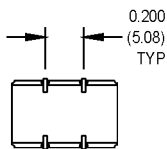
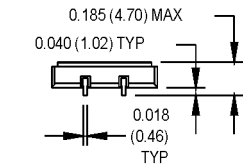
9x14 mm, 5.0 or 3.3 Volt, HCMOS/TTL, Clock Oscillator



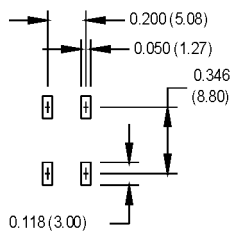
- J-lead ceramic package
- Wide operating temperature range
- RoHS version (-R) available



All dimensions in inches (mm).



SUGGESTED SOLDER PAD LAYOUT



Pin Connections

PIN	FUNCTION
1	N/C or Tristate
2	Ground
3	Output
4	+Vdd

Ordering Information

Product Series	M7S/M8S	1	3	F	A	J	-R	00.0000	MHz
M7S = 5.0 Volt M8S = 3.3 Volt									
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		
*8: ±20 ppm									
Output Type		F: Fixed	T: Tristate						
Symmetry/Logic Compatibility		A: 40/60 HCMOS/TTL	B: 45/55 TTL						
C: 45/55 HCMOS									
D: 45/55 HCMOS/TTL (1,000 - 107,000 MHz)									
Package/Lead Configurations		J: J Lead (Gold Flash Leads)							
RoHS Compliance		Blank: non-RoHS compliant part	-R: RoHS compliant part						
Frequency (customer specified)									

* Contact factory for availability.

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	1		125	MHz	
Operating Temperature	T _A	(See Ordering Information)				
Storage Temperature	T _S	-55		+125	°C	
Frequency Stability	ΔF/F	(See Ordering Information)				
Aging						
1st Year			±3		ppm	
Thereafter (per year)			±2		ppm	
Input Voltage	V _{dd}	4.5	5.0	5.5	V	M7S
		3.135	3.3	3.465	V	M8S
Input Current	I _{dd}			85	mA	M7S
				35	mA	M8S
Output Type						HCMOS/TTL
Load (M7S)		10 TTL or 50 pF				See Note 1
		10 TTL or 15 pF				1,000 to 80,000 MHz
Load (M8S)		10 TTL or 15 pF				80,001 to 125,000 MHz
						1,000 to 125,000 MHz
Symmetry (Duty Cycle)		(See Ordering Information)				
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
Output Current						
1 to 80 MHz				±16	mA	M7S
80,001 to 125 MHz				+16/-8	mA	M7S
1 to 80 MHz				±8	mA	M8S
80,001 to 125 MHz				+8/-4	mA	M8S
Rise/Fall Time	T _r /T _f					See Note 3
1 to 40 MHz				7/6	ns	M7S/M8S
40,001 to 125 MHz				5/4	ns	M7S/M8S
Tristate Function		Input Logic "1" or floating; output active				
		Input Logic "0"; output disables to high-Z				
Maximum Reflow Conditions		+240°C for 10 seconds				non-RoHS part
		+260°C for 10 seconds				RoHS Compliant part
Start up Time			5		ms	
Random Jitter	R _j		5	12	ps RMS	1,000 to 80,000 MHz
1-Sigma			40	100	ps RMS	80,001 to 125,000 MHz

1. TTL load - See load circuit diagram #1. HCMOS load - See load circuit diagram #2.

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