M7S/M8S Series
9x14 mm J-Leaded , HCMOS/TTL SMT Clock Oscillator

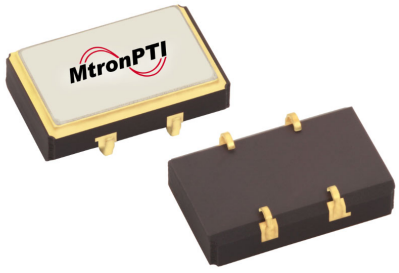
MtronPTI's M7S/M8S series oscillator is offered in an industry-standard 9x14 mm J-leaded ceramic package. This product family supports multiple stability and output options with a wide operating temperature range of -55°C to 125°C. Available with both RoHS and non-RoHS options.

Features:

- 9x14mm J-leaded Ceramic package
- Operating voltage 5V or 3.3V
- Frequency range 1 MHz to 125 MHz
- Operating temp range up to -55 °C to +125 °C
- HCMOS/TTL Output

Applications:

- Industrial
- Communication and Navigation
- Avionics and Aerospace
- Test and Measurement



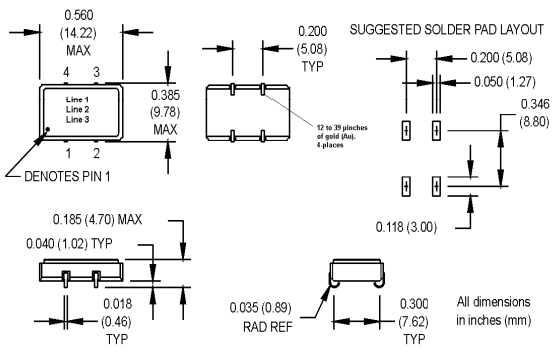
Note: M7S/M8S series is a direct cross to the Abracon/Ecliptek EH15 series oscillator

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency Range	F_0	1		125	MHz	
Frequency Stabilities						
vs. Operating Temperature	$\Delta F/F$	(See ordering information)			ppm	Includes initial tolerance @ +25°C and deviation over operating temperature range.
vs. Aging			±3		ppm	1st year
			±2		ppm	Thereafter (per year)
RF Output						
		HCMOS/TTL Compatible				
Output Load M7S M8S		10 TTL or 50 pF 10 TTL or 15 pF 15 pF				See Note 1 1.000 to 80.000 MHz 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_{DD}-0.5				HCMOS Load TTL Load
Logic "0" Level	V_{OL}			10%V_{DD} 0.5	V V	HCMOS Load TTL Load
Output Current 1 to 80 MHz 80.001 to 125 MHz 1 to 80 MHz 80.001 to 125 MHz			 ±16 +16/-8 ±8 +8/-4		 mA mA mA mA	 M7S M7S M8S M8S
Rise/Fall Time 1 to 40 MHz 40.001 to 125 MHz	T_R/T_F			 7/6 5/4	 ns ns	 M7S/M8S M7S/M8S
Tristate Function		Input Logic "1" or floating: Input Logic "0":				Output Active Output Disables to High Z
Start-up Time	T_{SU}			10	ms	$T_{ambient}$ = +25°C
Other Parameters						
Random Jitter (RMS)	RJ		5 12	12 100	ps RMS ps RMS	1.000 to 80.000 MHz 80.001 to 125.000 MHz
Operating Voltage and Current						
Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Units**	**Conditions**
Operating Voltage	V_{DD}	4.5	5.0	5.5	V	M7S
		3.135	3.3	3.465	V	M8S
Operating Current	I_{DD}			85	mA	M7S
				35	mA	M8S

MECHANICAL AND PIN OUT INFORMATION

Pad	Function
1	Enable/Disable or N/C
2	Ground
3	Output Q
4	Supply V_{DD}+



ENVIRONMENTAL CONDITIONS

Temperature					
Operating Temperature	T_A	See ordering information		°C	
Storage Temperature	T_S	-55	+125	°C	
Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)				
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)				
Solderability	Per EIAJ-STD-002				
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10-8 atm cc/s of helium)				