Features	Applications
Frequency Range: 1 to 125MHz 3.3/5.0 Volt Operation J-lead ceramic package Low profile, Surface mount	Avionics and Aerospace Communication and Navigation Military Radios Instrumentation and Industrial Test and Measurement Equipment

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F_0	1		125	MHz	

Frequency Stabilities

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
vs. Operating Temperature	ΔF/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

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
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	T_{DC}	See Ordering Information			%	@ 50% of waveform
Rise/Fall Time 1 to 40 MHz 40.001 to 125 MHz				 7/6 5/4	 ns ns	 M7S/M8S M7S/M8S
Logic "1" Function	V_{OH}	90% V_{DD} V_{DD} -0.5			V V	HCMOS Load TTL Load
Logic "0" Function	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 ±4 ±4		 mA mA mA mA	 M7S M7S M8S M8S

Startup Time	T_{SU}			10	ms	
Standby/Tristate Function		Input Logic "1" or floating: output active Input Logic "0": output to high-Z				
Random Jitter (RMS)			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
Standby Current				30	µA	Q Output type only

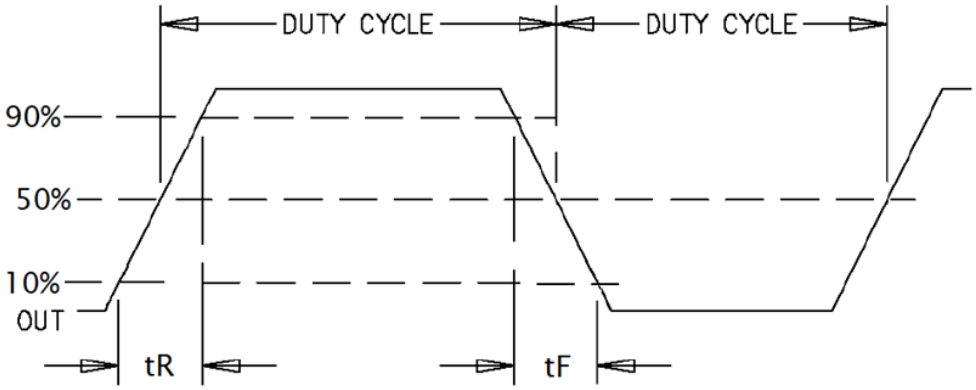
Temperature

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	OTR	See Ordering Information			°C	
Storage Temperature	STR	-55		+125	°C	

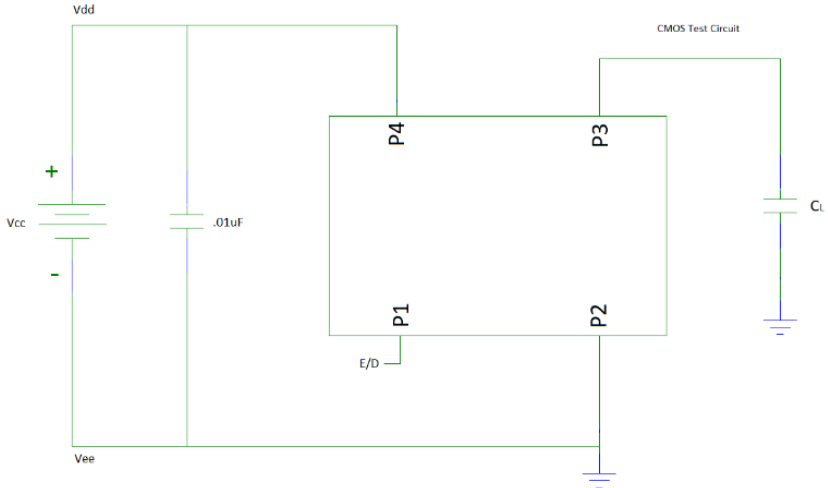
Environmental Conditions

Parameter	Conditions
Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-202, Method 201 & 204
Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min dwell, 10 cycles
Reflow Conditions	See "Figure 1"
Solderability	EIAJ-STD-002
Hermeticity	MIL-STD-202, Method 112, (1x10-8 atm. cc/s of Helium)

Output Waveform



Load Circuit Diagram



Soldering Profile

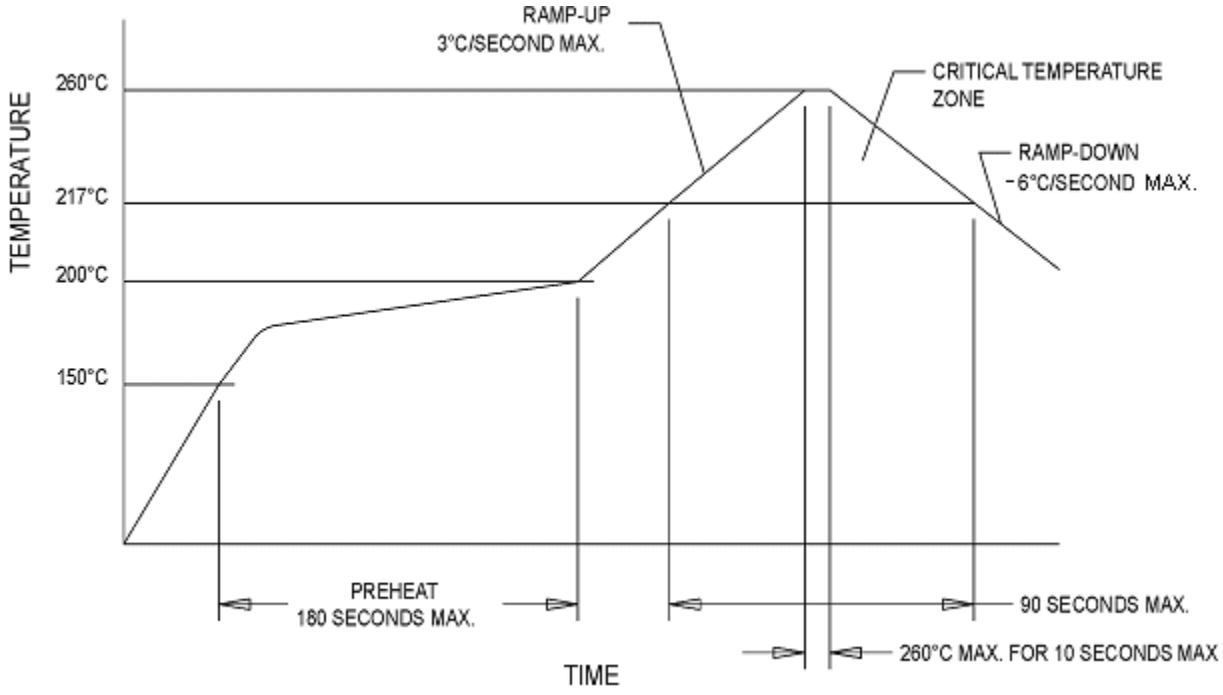
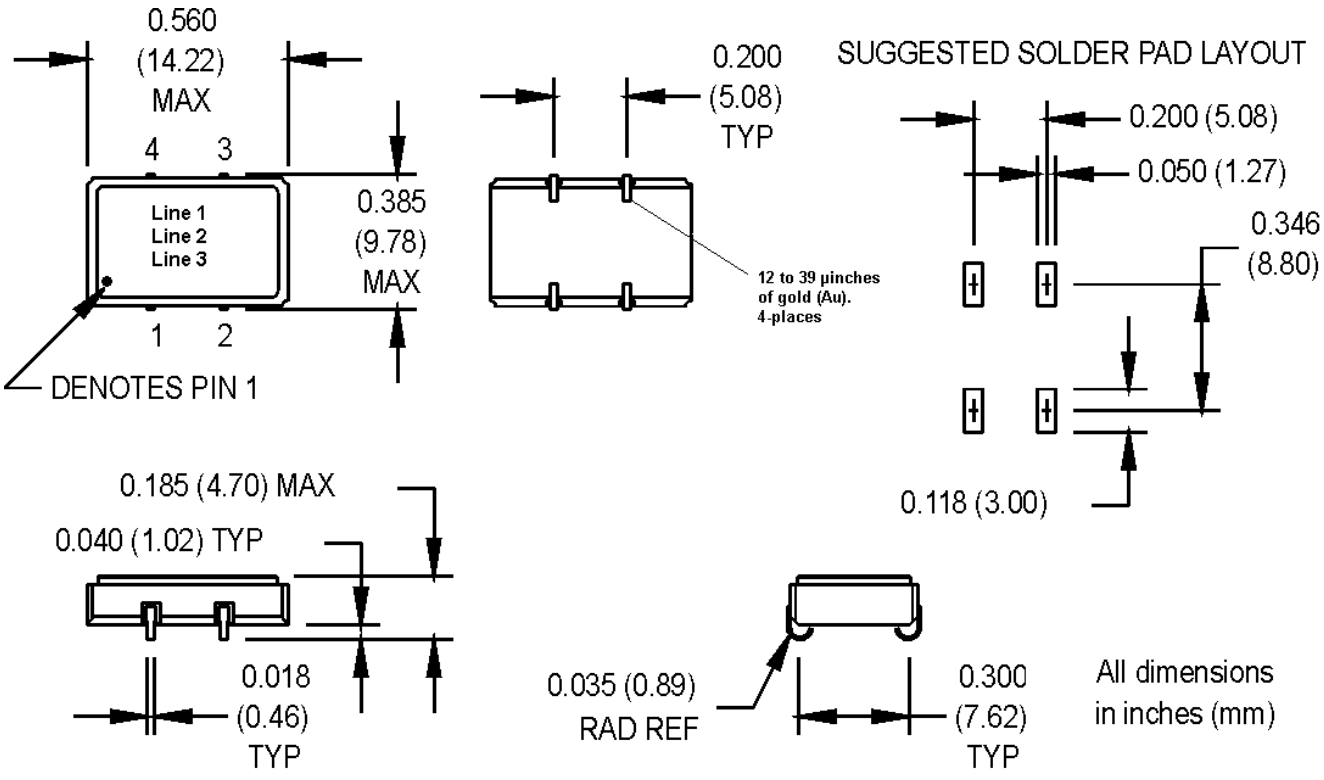


Figure 1

Mechanical and pin out information

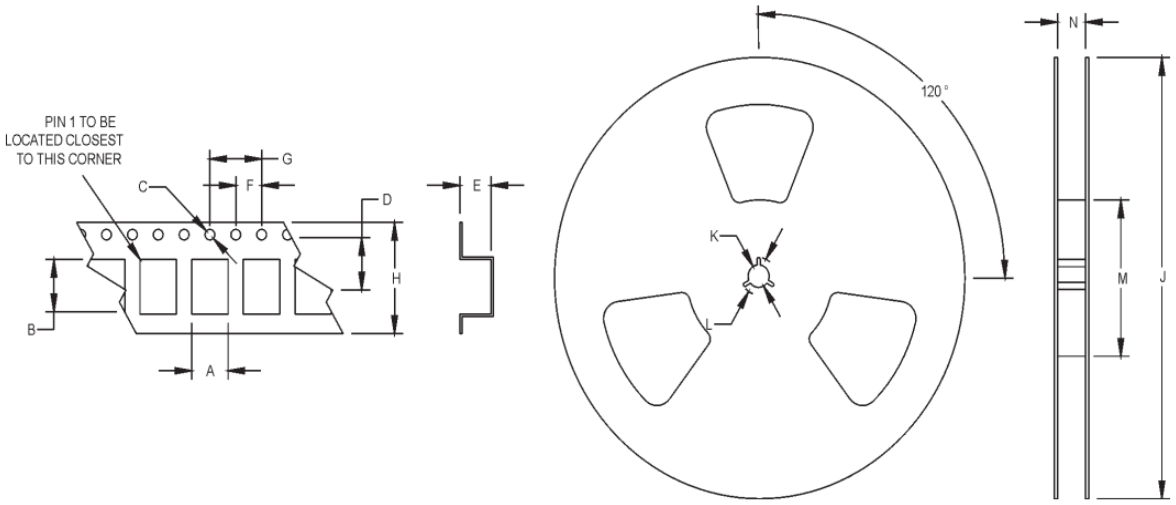
Pad	Function
1	Tri-state/Standby or N/C
2	Ground
3	Output Q
4	Supply V_{DD}+

Package Dimensions



Tape and Reel Specifications

All units in mm



A	B	C	D	E	F	G	H	J	K	L	M
9.54	14.62	1.5	11.5	5.4	4	12	24	330	6.5		100

Ordering Information

MxS 2 3 T C J -R 00.0000MHz

Product Series	
M7S	5.0 V
M8S	3.3 V

Temperature Range	
1	0°C to +70°C
6	-20°C to +70°C
2	-40°C to +85°C
3	-55°C to +105°C
4	-55°C to +125°C

Stability	
3	± 100 ppm
4	± 50 ppm
6	± 25 ppm
8	± 20 ppm

Frequency (Customer specified)

RoHS Compliance	
Blank	non-RoHS Compliant
-R	RoHS Compliant

Package/Lead Configuration	
J	Gold Flash J-Leads
S	Solder Dip

Symmetry/Logic Compatibility	
A	40/60 HCMOS/TTL
B	45/55 TTL
C	45/55 HCMOS
D	45/55 HCMOS/TTL

Output Type	
F	Fixed
Q	Standby Function
T	Tristate

Revision History

Date	Rev	Author	Details of Revision
04-22-26	A	AR	Initial Version