Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency		1.5		135	MHz	See Note 1

Frequency Stabilities

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency Stability	ΔF/F	See Ordering Information			ppm	
Aging			±3		ppm	1st year
			±2		ppm/year	Thereafter

RF Output

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Output Type		HCMOS Compatible				
Output Load				15/2	pf/TTL	See Note 2
Symmetry		See Ordering Information			%	½ V_{DD}
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
Rise/Fall Time	T_R/T_F			6 4 2	ns ns ns	See Note 3 1.500 to 50.000 MHz 50.001 to 80.000 MHz 80.001 to 135.000 MHz
Output Current				±2	mA	
Standby/Tristate Function		Input Logic "1" or floating: Output active				
		Input Logic "0": Output disables to high-Z				
Startup Time				10	ms	

Operating Voltage and Current

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Supply Voltage	V_{DD}	3.0	3.3	3.6	V	
Supply Current	I_{DD}			10 20 30 55	mA	1.500 to 20.000 MHz 20.001 to 50.000 MHz 50.001 to 67.000 MHz 67.001 to 135.000 MHz
Standby Current				10	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	

Additional Parameters

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Random Jitter	R_J		4	10	ps RMS	1-Sigma

Notes

Note 1	Consult factory for availability of higher frequencies.
Note 2	HCMOS Load - See Load circuit diagram. Consult factory with nonstandard output load requirements.
Note 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.

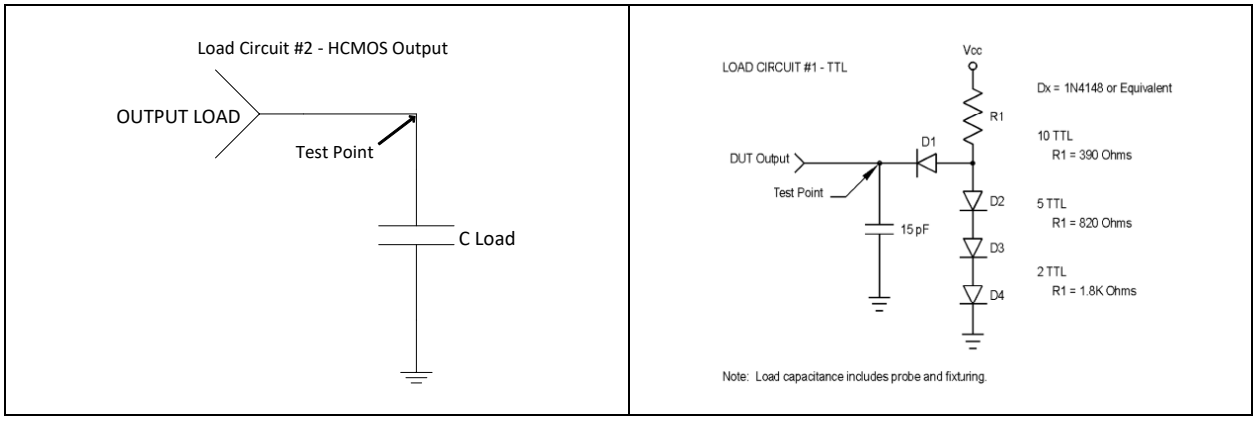
Features and Applications

Features	Applications
Leadless Ceramic Package/Seam Sealed	Avionics and Aerospace
Tristate or Standby function options	Communication and Navigation
Stabilities to ±20 ppm	Military Radios
MIL-STD-883 Screening	Test & Measurement Equipment
Custom Hi-Rel Screening	Instrumentation and Industrial
Fully RoHS 6 compliant (except Lead Codes L and S)	Measurement Equipment

Environmental Condition

Parameter	Conditions
Mechanical Shock	MIL-STD-202, Method 213, Condition C (100 g's, 6 mS duration, ½ sinewave)
Mechanical Vibration	MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)
Hermeticity	MIL-STD-202, Method 112, (1x10-8 atm. cc/s of Helium)
Thermal Cycle	MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min. dwell, 10 cycles)
Solderability	EIAJ-STD-002
Max Soldering Conditions	See solder profile, Figure 1

Load Circuit Diagrams



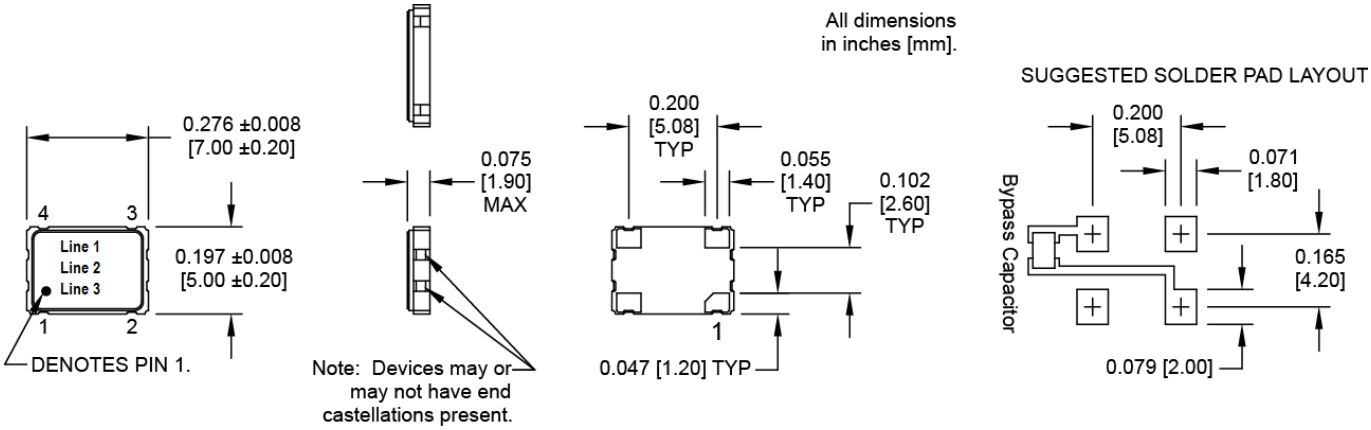
Mechanical and pin out information

Pad	Function
1	N/C. Tristate or Standby
2	Ground
3	Output
4	+VDD

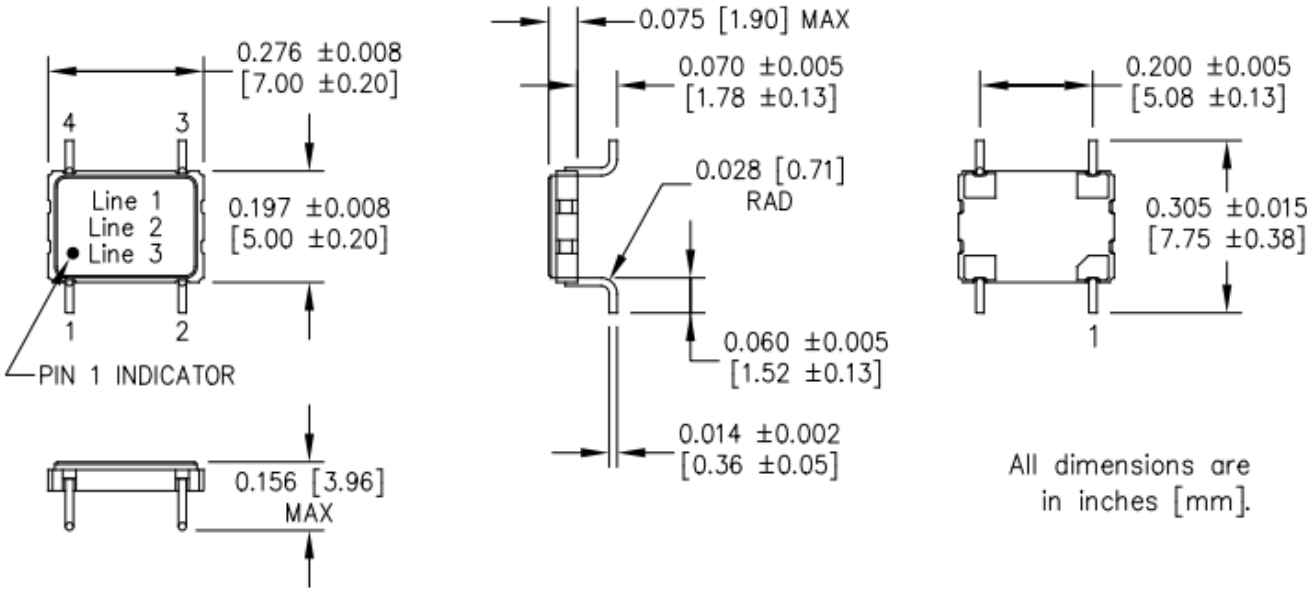
Part Marking	
Line 1	Part number
Line 2	xxMxxxx
Line 3	Myywwv

Legend	
M	Mtron
yy	Last digit of year
ww	Week of manufacture
v	Factory code

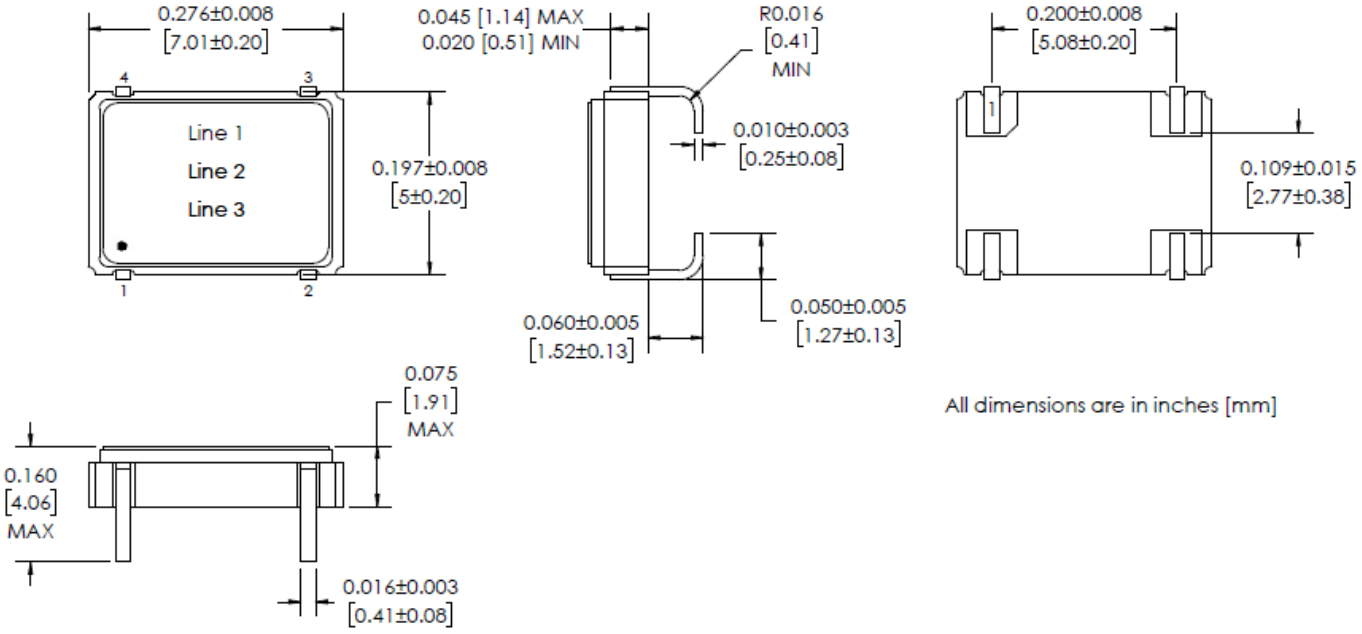
Graphs/Package Dimensions (N: Leadless Ceramic)



Graphs/Package Dimensions (G or L: Gull Wing)



Graphs/Package Dimensions (J or S: Formed J-Leads)



Lead Free Solder Profile

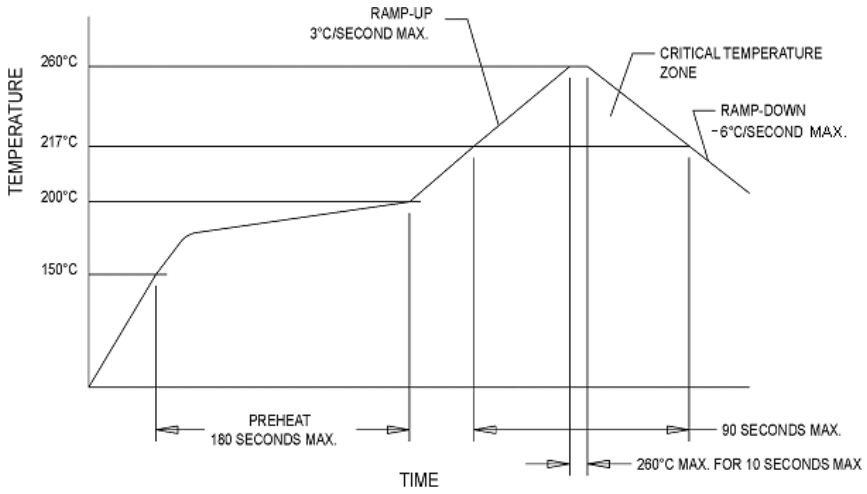
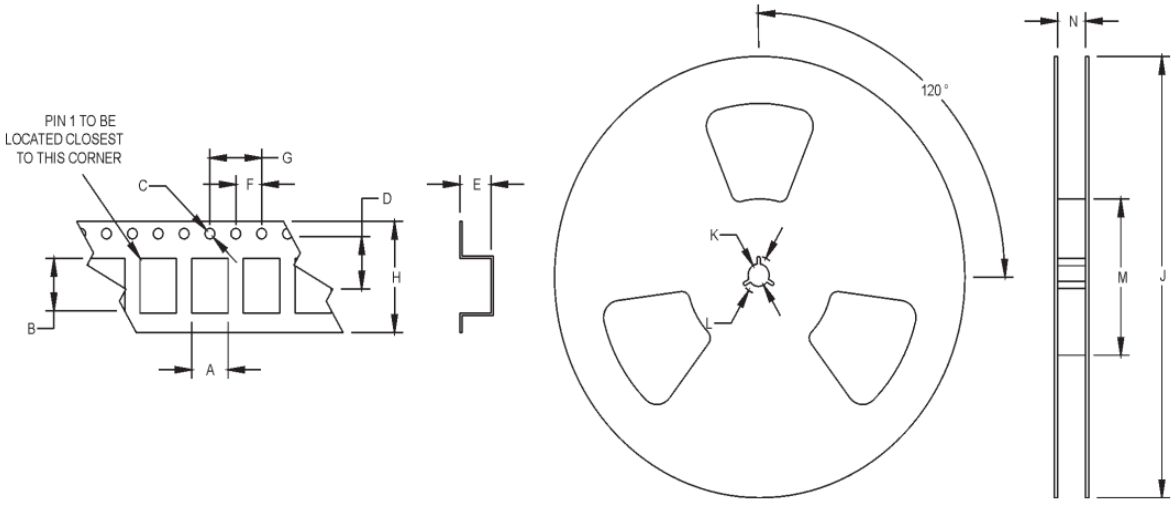


Figure 1

Tape and Reel Specifications (Leadless Ceramic Configuration)

All units in mm



A	B	C	D	E	F	G	H	J	K	L	M
5.32	7.28	1.5	7.5	2.2	4	8	16	178	13.5	24.8	80

Ordering Information

M2 2 3 T C N 00.0000MHz

Product Series	
M2	3.3 V

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 +125°C
6	-20°C to +70°C
7	0°C to +85°C

Stability	
3	± 100 ppm
4	± 50 ppm
5	± 35 ppm
6	± 25 ppm
8	± 20 ppm

Frequency (Customer specified)

Package/Lead Configuration	
N	Leadless Ceramic
G	Gull Wing Leads Solder Dipped (SAC)
L	Gull Wing Leads Solder Dipped (SnPb)
J	Formed J-Leads Solder Dipped (SAC)
S	Formed J-Leads Solder Dipped (SnPb)

Symmetry/Logic compatibility	
A or G	40/60% @ 50% V_{DD}
C	45/55% CMOS

Output Type	
F	Fixed
Q	Standby
T	Tristate

Revision History

3/23/2026 – Revision B