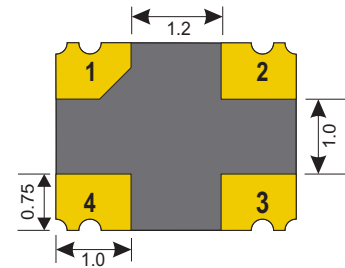
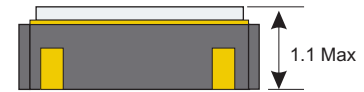
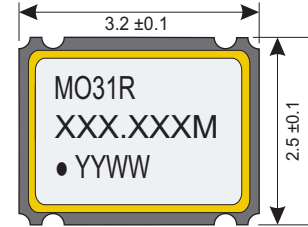




Specifications

Package		MO31R
Frequency Range (fo)		1.500MHz ~ 133.000MHz
Logic Family		HCMOS
Freq. Stability (Df/fo)		±100ppm
Aging/Year (fa)		3ppm
Temp. Range	Operating (TOPR)	-20°C ~ +70°C
	Storage (TSTG)	-55°C ~ +125°C
Phase Jitter BW 12KHz -20.0MHz		1pS Max RMS

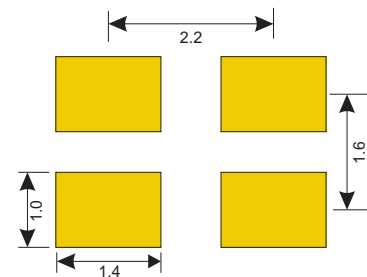
Dimensions (mm)



Electrical - HCMOS

Voltage (VDD)		1.8 VDC	2.5 VDC	3.3 VDC *
Power Supply	Input Current (Max)			
	1.5MHz - 20.000MHz	10mA		
	20.1MHz - 50.000MHz	15mA		
	50.1MHz - 85.000MHz	20mA		
	85.1MHz - 133.000MHz	25mA		
	1.5MHz - 20.000MHz		10mA	
	20.1MHz - 50.000MHz		15mA	
	50.1MHz - 110.000MHz		20mA	
	110.1MHz - 133.000MHz		30mA	
	1.5MHz - 20.000MHz			10mA
	20.1MHz - 50.000MHz			20mA
	50.1MHz - 85.000MHz			30mA
85.1MHz - 133.000MHz			50mA	
Stand-by current		10uA Max		
Output	Load CMOS	15pF Max		
	Voltage (VOL Max.)	10% Vdd		
	Voltage (VOH Min.)	90% Vdd		
Rise (Tr) & Fall (Tf) Time				
1.5 ≤ 60.0MHz		10ns Max		
60.0 ≤ 110.0MHz		7nS Max		
110.0 ≤ 156.250MHz		5nS Max		
Symmetry/Duty		45/55% @ 50% Level		

Recommended Pad Layout (mm)



* Default Voltage is 3.3V. For 1.8V or 2.5V, Use the V option on Page 2

Enable / Disable

En/Dis Pin 1	Output (Pin 3)	
	Default (Pin 3)	U2 Option (Pin 3)
70%Vcc Min	Enabled Active	Disabled Inactive
N/C or Open	Enabled Active	Enabled Active
30%Vcc Max	Disabled Inactive	Enabled Active
Enable Time	10mS Max	10mS Max
Disable Time	150nS Max	150nS Max

Connections

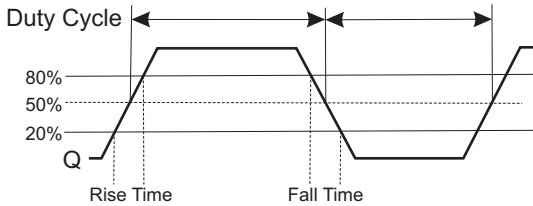
Pin 1	Enable / Disable
Pin 2	Ground
Pin 3	Output
Pin 4	Vdd



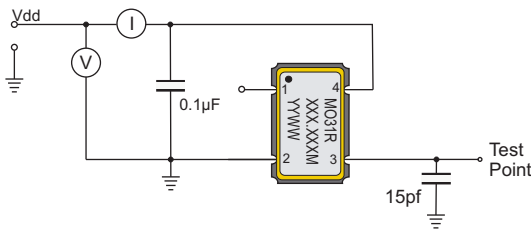
Absolute Maximum Ratings

Maximum Storage Temp	-55°C ~ +125°C
Voltage (VDD)	4.5 VDC
Input Voltage	-0.5Vdc ~ Vdd+0.5Vdc

Waveform

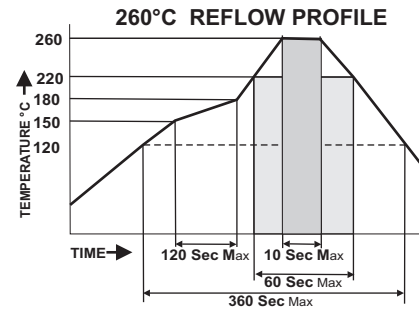


HCMOS Test Circuit



Environmental And Mechanical

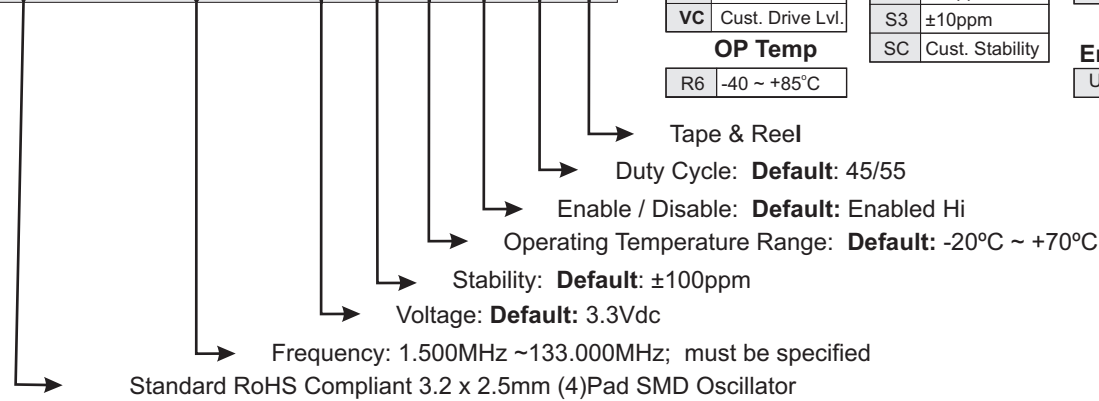
Temperature	10 Cycles of -30°C (30Mins), Normal (1Hr), 85°C (30Mins), Normal (1Hr)
Shock	Accelerated at 1000G for 1mS in each perpendicular axis.
Vibration	4 Cycles of 20G acceleration at 20 - 2,000Hz within 4 Minutes in each perpendicular axis.
Solder	Peak Temperature of 260°C Max for 10 Seconds with preheat of 160°C for 90±10% for 10 Seconds for a Maximum of 2 Cycles.



Part Number

MO31R - XXX.XXX M-VX SX RX UX QX-T

Voltage		Stability		Duty Cycle	
V1	1.8 Volt	S1	±50ppm	Q2	47.5/52.5 Duty
V2	2.5 Volt	S2	±25ppm	QC	Cust. Duty Cycle
VC	Cust. Drive Lvl.	S3	±10ppm		
OP Temp		SC	Cust. Stability	Enable/Disable	
R6	-40 ~ +85°C			U2	Lo Enable



Example: **MO31R-125.000M-T** 125.000MHz, 3.3V ±100ppm Oscillator operating at -20°C ~ +70°C, delivered on Tape & Reel

Example: **MO31R-125.000M-V1S2R6-T** 125.000MHz, 1.8V ±25ppm Oscillator operating at -40°C ~ +85°C, delivered on Tape & Reel

Tape & Reel

