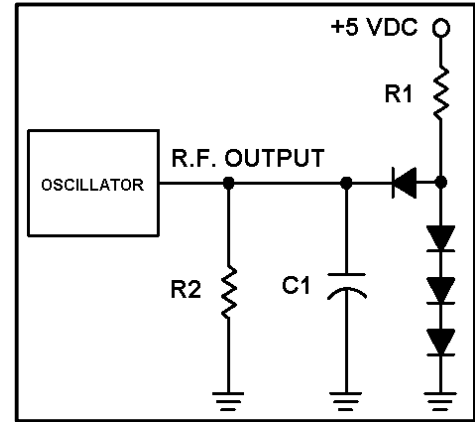


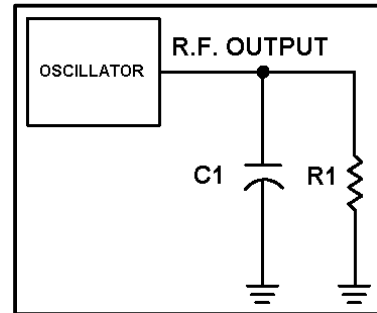
## TTL Load

N	Number of Loads
C1	( 2 x N ) pF
	C1 includes the test probe and fixture capacitance
R1	( 2640 / N ) ohms
R2	( 60,000 / N ) ohms
	MIL-PRF-55310D specifies R1 = 270 ohms and R2 = 6 k ohms for a 10 TTL load and R1 = 430 ohms and R2 = 10 k ohms for a 6 TTL load
	All Diodes are 1N3064 or equivalent



## HCMOS Load

N	Number of Loads
C1	( 10 x N ) pF
	C1 includes the test probe and fixture capacitance
R1	( 200,000 / N ) ohms
	MIL-PRF-55310D specifies C1 = 20 pF and R1 = 100 k ohms And does not mention the number of loads.
The input capacitance for most HCMOS devices is specified at a maximum of 10 pF ISOTEMP uses 10 pF per load.	



REFERENCES: [MIL-PRF-55310D](#) Military specification for crystal oscillators. U.S. government.

For further information on the specification and application of Ovenized Crystal Oscillators, please contact the sales or engineering staff at Isotemp Research, Inc. For reprints of this article, ask for document number 146-014.



P.O. Box 3389  
Charlottesville, VA 22903 USA  
Voice: (\*804) 295-3101  
FAX: (\*804) 977-1849  
\* 434 after 6/1/2001  
[www.isotemp.com](http://www.isotemp.com)

Written by Todd S. Tignor, BSEE, V.P. of Engineering ISOTEMP RESEARCH INC.

Isotemp Research Inc. is an American company building performance ovens and oscillators since 1968