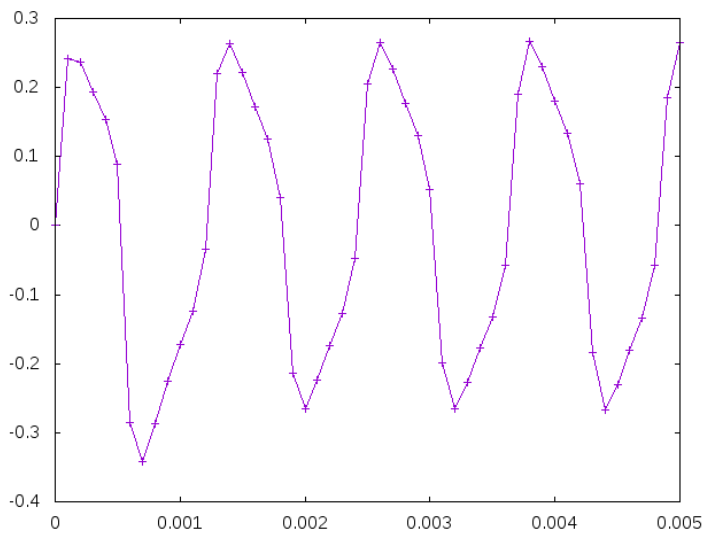
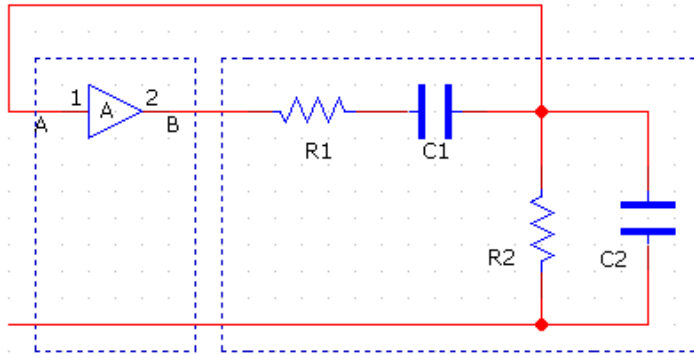


## Oscillator-WienBridge



\*Wien Bridge Oscillator

R1 101 102 4.7k

C1 102 103 0.033u

R2 103 0 4.7k

C2 103 0 0.033u

IS 0 4 PWL(0mS 0 .1mS 5.0 .4mS 5.0 .5mS 0 1mS 0 )

X2 103 4 101 AMP

.SUBCKT AMP 13 24 41

R11 11 12 1

X1 13 12 11 OPAMP

R21 11 22 1k

R24 24 22 1k

R22 22 21 5k

R23 23 0 1m

X2 23 22 21 OPAMP

R31 21 32 1k

```

R32 32 31 1k
D31 32 31 Diode
D32 31 32 Diode
R33 33 0 1m
X3 33 32 31 OPAMP
R41 41 42 1
X4 31 42 41 OPAMP
.ENDS
.SUBCKT OPAMP 1 2 6
R_in 1 2 10MEG
E_gain 3 0 1 2 100k
R_p1 3 4 1k
C_p1 4 0 1.59p
E_buffer 5 0 4 0 1
R_out 5 6 10
.ENDS
.MODEL Diode D ()
.PLOT TRAN v(103)
.TRAN .1m 5m 0
.END
.
1

```

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<sup>1</sup><http://spice-online.blogspot.com/search/label/Oscillator-WienBridge>