R19 47
C2 220µ
R3 33
V1 15

R1 3k3
R17 220
BC560_Cordell Q1
2SA1930_D Q4

D1 1N4148C
Q3 BD139_Cordell

J1 J2sk170
C4 1µ
D2 1N4148C
R5 2.7

R15 47
R13 3k9

U1 pot_lin
Rtot=1K wiper=.5364
D3 1N4148C
R14 1k

Vin
C1 2.2µ
R7 330
R16 47
vout
R6 2.7
R11 32

V4
V5
Vin1 SINE(0 0.7 20k)
Vin2 SINE(0 0.7 19k)
R12 100k
V3 AC 1
SINE(0 0.5 {freq})
R8 100k

J2 J2sj74
BD140_Cordell Q5
Q2 BC550_Cordell
Q6 2SC5171_D

R2 3k3
R18 220
C3 220µ
R4 33
R20 47
V2 15

PULSE(-1 1 0 0.01ns 0.01ns 10µ 20µ)
PULSE(1 -1 10µs 0.01ns 0.01ns 10µ 20µ)

;ac dec 1k 1 1g
.options plotwinsize=0
.options method=gear
.options numdgt=7
.param Freq=100K
.param FFT 8192
.param PS 10
.param PC 40
.param TStart (PS)/Freq
.param TEnd (PS+PC)/Freq
.param TStep 1/(FFT*Freq)
.tran {TStep} {TEnd} {TStart} {TStep}
.four {Freq} V(Vin) V(Vout)
.four {Freq} 4 V(Vin) V(Vout)
.option numdgt=15
.option reltol=1e-6
.option ptrantau=0

.INCLUDE potentiometer_standard.lib

;noise V(Vout) Vin oct 100 1 100meg
;op