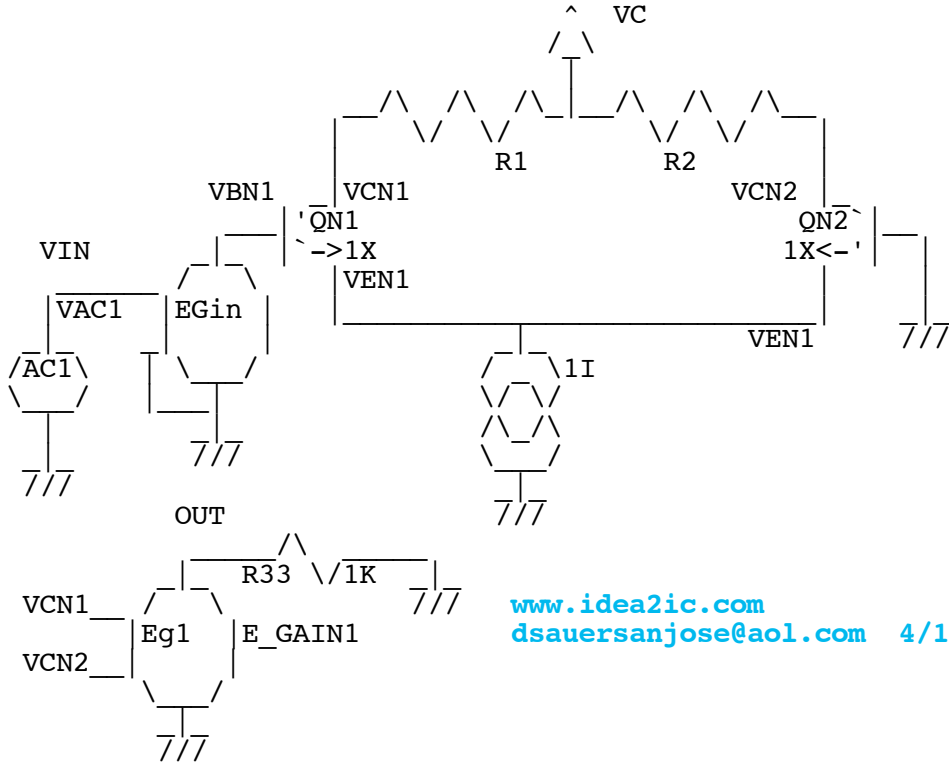


DIFF_Thd_Temp



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```
.OPTIONS GMIN=1e-18 METHOD=trap srcsteps = 1 gminsteps = 1
*=====
VCC      VC      0      DC      10
VAC1     VIN     0      DC      0      SIN( 0      1      1000 )
I1       VEN1   0      1u
QN1      VCN1   VBN1   VEN1   NPN1   1.00
QN2      VCN2   0      VEN1   NPN1   1.00
R1       VCN1   VC      52K
R2       VCN2   VC      52K
E_GAIN1  OUT    0      VCN1   VCN2   1
E_GAININ VBN1   0      VIN    0      1m
```

```
.control
tran      25u      5m      0      1u
plot      out
echo      "THD% versus VIN_vpk and Temp_C"
setplot   new
set       NameList = ( minus55C plus25C plus125C )
compose   TempVals values (-55) 25 125
compose   VinVals  values 1m 3m 10m 30m 100m 300m
settype   voltage   VinVals
let       NoOfTemp = length(TempVals)
let       NoOfVin  = length(VinVals)

begin
unset    interrupt
* =====Loop_Temp=====
let      j      = 1
while    (j      <= NoOfTemp )
let      Temp   = TempVals[j-1]
set      temp   = $&Temp
set      thisName = $NameList[$&j]
```

```

let          $thisName = 0 * vector(NoOfVin)
echo        "$&j $&Tmp $temp $thisName "

* =====Loop_Vin=====
let          k          = 1
while       (k          <= NoOfVin )
let         Vin         = VinVals[k-1]
alter      e_gainin gain = $&Vin
tran       25u          5m          0          1u
linearize
set         specwindow= "blackman"
spec       200      8k      200      v(out)
let        thdsq =mag(out[9])^2 +mag(out[14])^2 +mag(out[19])^2 +
mag(out[24])^2
let        thd_percent= 100*sqrt(thdsq)/mag(out[4])
echo       "$&unknown.Vin      $&thd_percent"
let        unknown.{ $thisName}[ unknown.k-1] = thd_percent
repeat    3
destroy
end
if         ($?interrupt)
goto      bail
endif
let        k =          k + 1
endwhile
setscale  VinVals
plot      $NameList loglog title "THD_% vs Vin_pK and Temp_C"
let        j =          j + 1
endwhile
label     bail
echo     "Done."
end
.endc

```

```

*=====
.model    NPN1    NPN(    BF=2100 VAF=216 )
.model    PNP1    PNP(    BF=2100 VAF=21 )
.end

```

=====END_OF_SPICE=====

To Covert PDF to plain text click below
<http://www.fileformat.info/convert/doc/pdf2txt.htm>

Graph 115 - unknown306: THD_% vs Vin_pK and Temp_C

