Q1 "npnhw"
e from spectre during topology check.

Only one connection to node 'net3'.

it inventory:
   nodes 8
   equations 17
     bjt 3
     quantity 6
     resistor 4

ring remote command node using MPSU service (spectre, np1. v0.0, spectre0_21273_2).  

******************************
alysis 'ac': freq = (10 Hz -> 100 kHz)
******************************
c: freq = 12.59 Hz (2.5 %), step = 1.369 Hz (1.25 %)
c: freq = 19.95 Hz (7.5 %), step = 2.17 Hz (1.25 %)
c: freq = 31.62 Hz (12.5 %), step = 3.439 Hz (1.25 %)
c: freq = 50.12 Hz (17.5 %), step = 5.45 Hz (1.25 %)
c: freq = 79.43 Hz (22.5 %), step = 8.638 Hz (1.25 %)
c: freq = 125.9 Hz (27.5 %), step = 13.69 Hz (1.25 %)
c: freq = 199.5 Hz (32.5 %), step = 21.7 Hz (1.25 %)
c: freq = 316.2 Hz (37.5 %), step = 34.39 Hz (1.25 %)
c: freq = 501.2 Hz (42.5 %), step = 54.5 Hz (1.25 %)
c: freq = 794.3 Hz (47.5 %), step = 86.38 Hz (1.25 %)
c: freq = 1259 Hz (52.5 %), step = 136.9 Hz (1.25 %)
c: freq = 1995 Hz (57.5 %), step = 217 Hz (1.25 %)
c: freq = 3162 Hz (62.5 %), step = 343.9 Hz (1.25 %)
c: freq = 5012 Hz (67.5 %), step = 545 Hz (1.25 %)
c: freq = 7943 Hz (72.5 %), step = 863.8 Hz (1.25 %)
c: freq = 1259 Hz (77.5 %), step = 1369 kHz (1.25 %)
c: freq = 1995 Hz (82.5 %), step = 217 kHz (1.25 %)
c: freq = 3162 Hz (87.5 %), step = 3439 kHz (1.25 %)
c: freq = 5012 Hz (92.5 %), step = 545 kHz (1.25 %)
c: freq = 7943 Hz (97.5 %), step = 8638 kHz (1.25 %)

ulated DC solution time = 0 s.
nsic ac analysis time = 10 ms.
time required for ac analysis 'ac' was 10 ms.

Parameter: writing model parameter values to rawfile.
nt: writing instances parameter values to rawfile.
tParameter: writing output parameter values to rawfile.
nParamVals: writing netlist parameters to rawfile.
Accuracy Parameters

- relref
- iteratio
- steadyratio
- maxacfreq
- maxperiods
- finitediff: [yes, refine, no]
- highorder: [yes, no]

Annotation Parameters

- stats: [yes, no]
- annotate

Output Parameters

- save: [selected, lv1pub, lv1, allpub, all]
- oppoint: [rawfile, screen, logfile, no]
- skipstart
- skipstop
Conv norm = 0, max dval(0) = 0, took 40 ms.

{'pss': time = (0 s -> 100 ns)

pss: time = 2.5 ns  (2.5 %), step = 500 ps  (500 m)
pss: time = 8 ns   (8 %), step = 500 ps  (500 m)
pss: time = 13 ns  (13 %), step = 500 ps  (500 m)
pss: time = 18 ns  (18 %), step = 500 ps  (500 m)
pss: time = 22.5 ns (22.5 %), step = 500 ps  (500 m)
pss: time = 27.5 ns (27.5 %), step = 500 ps  (500 m)
pss: time = 32.5 ns (32.5 %), step = 500 ps  (500 m)
pss: time = 37.5 ns (37.5 %), step = 500 ps  (500 m)
pss: time = 42.5 ns (42.5 %), step = 500 ps  (500 m)
pss: time = 47.5 ns (47.5 %), step = 500 ps  (500 m)
pss: time = 52.5 ns (52.5 %), step = 500 ps  (500 m)
pss: time = 57.5 ns (57.5 %), step = 500 ps  (500 m)
pss: time = 62.5 ns (62.5 %), step = 500 ps  (500 m)
pss: time = 67.5 ns (67.5 %), step = 500 ps  (500 m)
pss: time = 72.5 ns (72.5 %), step = 500 ps  (500 m)
pss: time = 77.5 ns (77.5 %), step = 500 ps  (500 m)
pss: time = 82.5 ns (82.5 %), step = 500 ps  (500 m)
pss: time = 87.5 ns (87.5 %), step = 500 ps  (500 m)
pss: time = 92.5 ns (92.5 %), step = 500 ps  (500 m)
pss: time = 97.5 ns (97.5 %), step = 500 ps  (500 m)

Conv norm = 0, max dval(0) = 0, took 40 ms.

Order 16 used in  2 subintervals.

Conv residual norm = 0
Conv solution-change norm in ftd = 0.
Number of refinements using multi-interval Chebyshev polynomial spectr:
algorithm = 1. Total steps = 32

MIC-PSA finite-difference refinement finished, took 20 ms.

pss: The steady-state solution was achieved in 3 iterations.
Number of accepted pss steps = 32.
Total time required for pss analysis 'pss' was 370 ms.

modelParameter: writing model parameter values to rawfile.
element: writing instance parameter values to rawfile.
outputParameter: writing output parameter values to rawfile.
designParamVals: writing netlist parameters to rawfile.

R: sevEditSelectedAnas('sevSes...
Periodic Noise Analysis

PSG Beat Frequency (Hz): 2.46

Sweep Type: Absolute

Frequency Sweep Range (Hz):
- Start: 1 kHz
- Stop: 10 GHz

Sweep Type: Automatic

Add Specific Points: Unchecked

Sidebands:
- Maximum sideband: 5

Output:
- Voltage: Selected
- Positive Output Node: /net09[1]
- Negative Output Node: /net015[1]
- Input Source: Port
- Input Port Source: /PORT3
- Reference side-band: Enter in field: -1
### Noise Summary

Data is from noise analysis

<table>
<thead>
<tr>
<th>Type</th>
<th>Spot noise</th>
<th>Integrated Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise Unit</td>
<td>V^2</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>1K</td>
<td></td>
</tr>
</tbody>
</table>

**FILTER**

- Include All Types: bjt, resistor
- Include None: 
- Exclude instances: 
- Select: 
- Clear: 

**TRUNCATE & SORT**

- Truncate: by number
- Top: 30
- Sort by: noise contributors, composite noise, device name

Press plot button on the Direct Plot Form
Noise Summary (in V^2/Hz) at 1kHz Sorted By Noise Contributors
Output Noise = 3.1515e-17
It referred noise available
We noise summary info is for pnoise data