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**** 02/26/20 10:17:30 ***** Evaluation PSpice (Nov 1999)
****      CIRCUIT DESCRIPTION
*****
* Schematics Version 9.1 - Web Update 1
** Analysis setup **
.ac DEC 10 1 1000MEG
.OP
.LIB "U:\electrical_engineering\oster\pspice\ee352\spring19\hw4
\10.108a\hw4.lib"
C_C1      VE 0 100uF
V_VS      $N_0001 0 DC 0V AC 1V
R_RC      VOUT $N_0002 10k
V_V1      $N_0002 0 20V
I_I1      VE $N_0003 DC .5mA
V_V2      $N_0003 0 -20V
Q_Q2      VOUT $N_0001 VE QbreakN-X
.probe
.END

```

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****      BJT MODEL PARAMETERS
*****
                QbreakN-X
                NPN
                BF 100
                MJE 0
                CJC 2.000000E-12
                MJC 0
                TF 300.000000E-12

```

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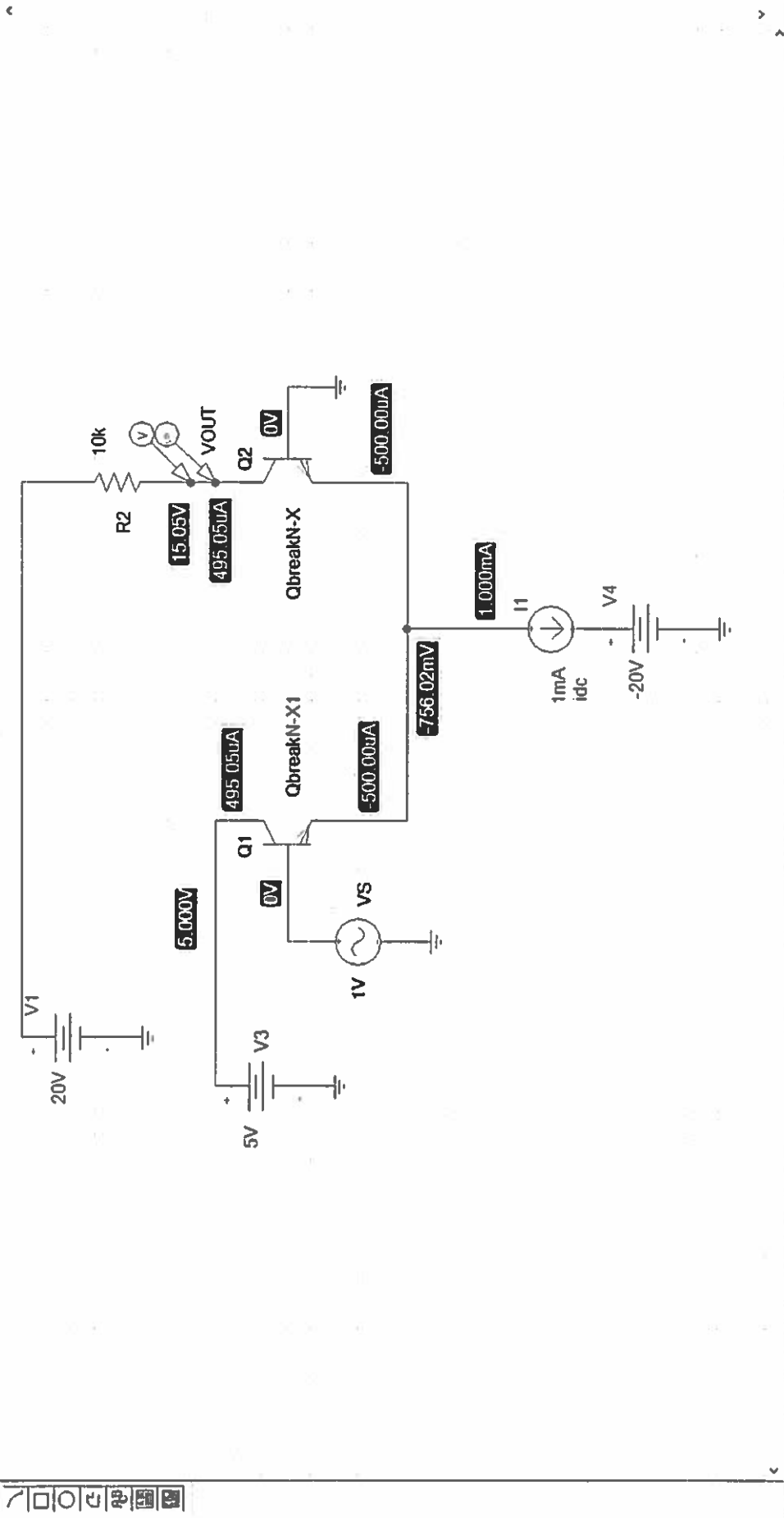
****      OPERATING POINT INFORMATION      TEMPERATURE = 27.000
DEG C
*****

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**** BIPOLAR JUNCTION TRANSISTORS

| | | |
|--------|-----------|-------|
| NAME | Q_Q2 | |
| MODEL | QbreakN-X | |
| GM | 1.91E-02 | (.02) |
| RPI | 5.22E+03 | (5K) |
| RO | 1.00E+12 | |
| CBE | 5.74E-12 | (6PF) |
| CBC | 2.00E-12 | (2PF) |
| BETAAC | 1.00E+02 | |
| FT/FT2 | 3.93E+08 | |

JOB CONCLUDED



**** 02/26/20 10:34:18 ***** Evaluation PSpice (Nov 1999) *****

**** CIRCUIT DESCRIPTION

** Analysis setup **

.ac DEC 10 1 1000MEG

.OP

.LIB "U:\electrical_engineering\oster\pspice\ee352\spring19\hw4\10.108c\hw4.lib"

* Schematics Netlist *

V_V1 \$N_0001 0 20V
R_R2 VOUT \$N_0001 10k
I_I1 \$N_0002 \$N_0003 DC 1mA
V_V4 \$N_0003 0 -20V
Q_Q1 \$N_0005 \$N_0004 \$N_0002 QbreakN-X1
Q_Q2 VOUT 0 \$N_0002 QbreakN-X
V_V3 \$N_0005 0 5V
V_V5 \$N_0004 0 DC 0V AC 1V
.probe
.END

**** BJT MODEL PARAMETERS

| | QbreakN-X1 | QbreakN-X |
|-----|----------------|----------------|
| | NPN | NPN |
| BF | 100 | 100 |
| MJE | 0 | 0 |
| CJC | 2.000000E-12 | 2.000000E-12 |
| MJC | 0 | 0 |
| TF | 300.000000E-12 | 300.000000E-12 |

**** BIPOLAR JUNCTION TRANSISTORS

| NAME | Q_Q1 | Q_Q2 |
|--------|------------|-----------|
| MODEL | QbreakN-X1 | QbreakN-X |
| GM | 1.91E-02 | 1.91E-02 |
| RPI | 5.22E+03 | 5.22E+03 |
| RO | 1.00E+12 | 1.00E+12 |
| CBE | 5.74E-12 | 5.74E-12 |
| CBC | 2.00E-12 | 2.00E-12 |
| FT/FT2 | 3.93E+08 | 3.93E+08 |

(.02)
(5k)
(6pF)
(2pF)

JOB CONCLUDED

