

.MODEL QBF820 NPN(

+ IS=9.109E-15
+ NF=0.9949
+ ISE=5.02E-24
+ NE=2.5
+ BF=141.1
+ IKF=0.009124
+ VAF=22.16
+ NR=0.9917
+ ISC=6.582E-12
+ NC=1.397
+ BR=11.42
+ IKR=0.02146
+ VAR=93
+ RB=1
+ IRB=1E-06
+ RBM=0.5
+ RE=0.3288
+ RC=0.5195
+ XTB=0
+ EG=1.11
+ XTI=3
+ CJE=1.504E-11
+ VJE=0.7202
+ MJE=0.3499
+ TF=1.26E-09
+ XTF=298.9
+ VTF=2.447
+ ITF=0.1815
+ PTF=0
+ CJC=3.751E-12
+ VJC=0.158
+ MJC=0.2757
+ XCJC=0.1041
+ TR=1E-08
+ CJS=0
+ VJS=0.75
+ MJS=0.333
+ XTB=0
+ XTI=3
+ EG=1.11
+ FC=0.895)
*