

```
.MODEL QBF822W 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)  
*
```