

.MODEL QBCP54-16 NPN(

+ IS=6.119E-14  
+ NF=0.9948  
+ ISE=5.844E-15  
+ NE=1.469  
+ BF=130.4  
+ IKF=0.8  
+ VAF=54.27  
+ NR=0.9905  
+ ISC=1.342E-13  
+ NC=1.183  
+ BR=14.53  
+ IKR=0.2049  
+ VAR=30  
+ RB=0.5  
+ IRB=1E-06  
+ RBM=0.5  
+ RE=0.1114  
+ RC=0.082  
+ XTB=0  
+ EG=1.11  
+ XTI=3  
+ CJE=1.234E-10  
+ VJE=0.6917  
+ MJE=0.338  
+ TF=6.543E-10  
+ XTF=223.8  
+ VTF=1.892  
+ ITF=10  
+ PTF=0  
+ CJC=3.49E-11  
+ VJC=0.5  
+ MJC=0.388  
+ XCJC=0.15  
+ TR=1E-32  
+ CJS=0  
+ VJS=0.75  
+ MJS=0.333  
+ FC=0.9232 )

\*