

.MODEL QBFS20 NPN(

+ IS=3.4640E-16  
+ NF=0.9740  
+ ISE=1.00E-15  
+ NE=1.508  
+ BF=147.8  
+ IKF=0.1343  
+ VAF=117.1  
+ NR=0.9420  
+ ISC=1.231E-15  
+ NC=1.148  
+ BR=4.078  
+ IKR=0.1809  
+ VAR=1.954  
+ RB=1  
+ IRB=1E-06  
+ RBM=1  
+ RE=0.7337  
+ RC=1.1040  
+ XTB=0  
+ EG=1.11  
+ XTI=3  
+ CJE=2.372E-12  
+ VJE=0.5979  
+ MJE=0.170  
+ TF=2.089E-10  
+ XTF=198.3  
+ VTF=1.451  
+ ITF=0.2547  
+ PTF=0  
+ CJC=0.842E-12  
+ VJC=0.5323  
+ MJC=0.2749  
+ XCJC=0.1500  
+ TR=2.00E-08  
+ CJS=0  
+ VJS=0.75  
+ MJS=0.333  
+ FC=0.9793 )

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