

.MODEL QBFS19 NPN(

+ IS=2.9320E-16  
+ NF=0.9869  
+ ISE=1.814E-15  
+ NE=1.411  
+ BF=84.24  
+ IKF=0.1702  
+ VAF=130.5  
+ NR=0.9848  
+ ISC=3.133E-16  
+ NC=0.9935  
+ BR=2.933  
+ IKR=9.000  
+ VAR=4.860  
+ RB=1  
+ IRB=1E-06  
+ RBM=1  
+ RE=0.8047  
+ RC=0.9861  
+ XTB=0  
+ EG=1.11  
+ XTI=3  
+ CJE=1.922E-12  
+ VJE=0.6927  
+ MJE=0.3045  
+ TF=6.298E-10  
+ XTF=113.6  
+ VTF=5.391  
+ ITF=0.4458  
+ PTF=0  
+ CJC=1.554E-12  
+ VJC=0.3932  
+ MJC=0.1891  
+ XCJC=0.1200  
+ TR=1.00E-07  
+ CJS=0  
+ VJS=0.75  
+ MJS=0.333  
+ FC=0.9333 )

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