

.MODEL QBSP19 NPN (

+ IS = 1.524E-14  
+ NF = 0.9939  
+ ISE = 6.205E-15  
+ NE = 1.35  
+ BF = 99.15  
+ IKF = 0.287  
+ VAF = 222.6  
+ NR = 0.98  
+ ISC = 5.528E-13  
+ NC = 1.3  
+ BR = 2.769  
+ IKR = 0.1  
+ VAR = 1000  
+ RB = 28.54  
+ IRB = 0.0001965  
+ RBM = 11.96  
+ RE = 0.25  
+ RC = 1.08  
+ CJE = 4.144E-11  
+ VJE = 0.6926  
+ MJE = 0.338  
+ TF = 1.3E-09  
+ XTF = 40  
+ VTF = 3.5  
+ ITF = 0.08  
+ PTF = 0  
+ CJC = 6.207E-12  
+ VJC = 0.1878  
+ MJC = 0.1811  
+ XCJC = 0.4132  
+ TR = 5.5E-07  
+ CJS = 0  
+ VJS = 0.75  
+ MJS = 0.333  
+ XTB = 0  
+ XTI = 3  
+ EG = 1.11  
+ FC = 0.8605)

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