

.MODEL QBC848 NPN(

+ IS = 1.822E-14
+ NF = 0.9932
+ ISE = 2.894E-16
+ NE = 1.4
+ BF = 324.4
+ IKF = 0.109
+ VAF = 82
+ NR = 0.9931
+ ISC = 9.982E-12
+ NC = 1.763
+ BR = 8.29
+ IKR = 0.09
+ VAR = 17.9
+ RB = 10
+ IRB = 5E-06
+ RBM = 5
+ RE = 0.649
+ RC = 0.7014
+ XTB = 0
+ EG = 1.11
+ XTI = 3
+ CJE = 1.244E-11
+ VJE = 0.7579
+ MJE = 0.3656
+ TF = 4.908E-10
+ XTF = 9.51
+ VTF = 2.927
+ ITF = 0.3131
+ PTF = 0
+ CJC = 3.347E-12
+ VJC = 0.5463
+ MJC = 0.391
+ XCJC = 0.6193
+ TR = 9E-08
+ CJS = 0
+ VJS = 0.75
+ MJS = 0.333
+ XTB = 0
+ XTI = 3
+ EG = 1.11
+ FC = 0.979)
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