

.MODEL QBC848A NPN(

+ IS = 9.677E-15
+ NF = 0.9922
+ ISE = 5.44E-15
+ NE = 2
+ BF = 182.1
+ IKF = 0.14
+ VAF = 143.8
+ NR = 0.9935
+ ISC = 5.236E-12
+ NC = 1.53
+ BR = 7.004
+ IKR = 0.06
+ VAR = 31.15
+ RB = 10
+ IRB = 5E-06
+ RBM = 4
+ RE = 0.78
+ RC = 0.656
+ XTB = 0
+ EG = 1.11
+ XTI = 3
+ CJE = 1.443E-11
+ VJE = 0.733
+ MJE = 0.3514
+ TF = 6.04E-10
+ XTF = 8.94
+ VTF = 3.78
+ ITF = 0.2711
+ PTF = 0
+ CJC = 3.287E-12
+ VJC = 0.5444
+ MJC = 0.3954
+ XCJC = 0.693
+ TR = 1.1E-07
+ CJS = 0
+ VJS = 0.75
+ MJS = 0.333
+ XTB = 0
+ XTI = 3
+ EG = 1.11
+ FC = 0.789)
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