

```

.MODEL Q2SC4793, x NPN ( Is=1.8E-09 NF=1.43 BF=146.38 VAF=273 RF=2.6 Nfc=0.95 ISE=4.286997E-10 NE=2.223529 BR=4 NR=1 VAR=20 IRR=1.05 RE=0 RB=1.7 RC=1.25 CJE=5.96964E-10 VJE=1.1 MJE=0.5 CJC=5.78E-11 VJC=0.3 MJC=0.3 TF=1.22678E-09 FC=0.5 ITF=10 XTF=49.52253015 TR=8E30N)

.model 2sc970 NPN(Is=465.4f Xbo= Egn=1.11 Val=57.5f A=407.6 Isc=4.683p Nfc=2.059MODEL 2C3503 NPN
+ Bfc=3998 Nfc=1.192 Xbo=1.5 Var=100 Br=1 Isc=465.4f Nfc=1.048
+ Bfc=6.032 Rfc=2.343 Cjc=11.59p Mjc=4014 Vjc=1.15f Fc=5 Cje=5p
+ Mjc=3333 Vjc=75 Tr=10n Tr1=1.252n Br=1 Xbo=0 Vbo=10)
+ Is=7.210E-13 Bfc=156.09 VAF=600
+ RF=48.12332 ISE=1.2039E-14 NE=1.5
+ Bfc=0.64499 Nfc=1.5 VAR=100 IRR=0.05102
+ ISC=6.644E-09 RC=1.03 RBN=0.034

.model 2sc2440 NPN(Is=49.13f Xbo= Egn=1.11 Val=422.2 Bfc=262.8 Isc=1.179p
+ Nfc=1.782 Bfc=4700 Nfc=3023 Xbo=1.5 Var=100 Br=1 Isc=495.5f
+ Nfc=1.796 Nfc=5.85 Rfc=2032 Cjc=7.561p Mjc=3472 Vjc=3995 Fc=5
+ Cjc=8.20E-12 Cje=5p
+ Cjc=5p Mjc=3333 Vjc=75 Tr=10n Tr1=1.252n Br=1 Xbo=0 Vbo=10)
+ Is=7.210E-13 Bfc=156.09 VAF=600
+ RF=48.12332 ISE=1.2039E-14 NE=1.5
+ Bfc=0.64499 Nfc=1.5 VAR=100 IRR=0.05102
+ ISC=6.644E-09 RC=1.03 RBN=0.034
+ RC=1.215 RBN=12.134 RBN=12.134
+ RBN=30e-6 CJC=7.10E-12 CJC=7.10E-12
+ VJC=1.15f TF=7.025E-10 XTF=2
+ VTF=35 ITF=10 XTF=49.52253015 TR=8E30N
+ EGN=0.78 XTB=1.5 FC=0.5

Iran 0 40s 0 0.1 startup

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