

## SPICE PARAMETER

### EML17

```
* EML17_DT PNP DT model
* Date: 2007/01/06
* BJT with resistors
*****C B E
.SUBCKT EML17_DT 1 2 3
R1 2 Base Rb 47k
R2 Base 3 Re 47K
Q1 1 Base 3 QDTA1
.MODEL Rb RES
+ R=1
.MODEL Re RES
+ R=1
.MODEL QDTA1 PNP
+ IS=20.000E-15
+ BF=187.64
+ VAF=10
+ IKF=.21074
+ ISE=20.000E-15
+ NE=1.5456
+ BR=13.699
+ VAR=100
+ IKR=1.2543
+ ISC=17.145E-12
+ NC=1.4944
+ NK=.98507
+ RE=.5
+ RB=14.057
+ RC=1.2972
+ CJE=22.937E-12
+ MJE=.58268
+ CJC=11.613E-12
+ MJC=.43988
+ TF=500.00E-12
+ XTF=582.01
+ VTF=194.23
+ ITF=18.786
+ TR=300.00E-9
+ XTB=1.5000
.ENDS EML17_DT
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```
* DEML17 D model
* Date: 2007/02/01
.MODEL DEML17 D
+ IS=48.174E-9
+ N=1.0586
+ RS=.77069
+ IKF=23.097
+ XTI=2
+ EG=.69
+ CJO=15.309E-12
+ M=.4601
+ VJ=.41798
+ ISR=13.004E-9
+ BV=30
+ IBV=500.00E-9
+ TT=9.3775E-9
```