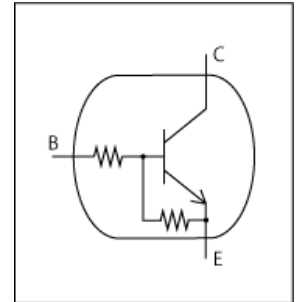


# PSpice Model

## BRT (Bias Resistor Transistor)

### ROHM

### DTC115EDTC123EDTC124E



#### Model Information

**Model** A macro model based on Mextram model  
**Call Name** MDC\_DTC115EDTC123EDTC124E\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_DTC115EDTC123EDTC124E\_PS02.lib  
 Model Report MDC\_DTC115EDTC123EDTC124E\_PS.pdf (this file)

**Verified Simulator Version** PSpice version 16.6  
**Note**

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 20121023
- Product name DTC115EDTC123EDTC124E
- Company name ROHM Co., Ltd.
- Characteristics IcVi[OFF],IcVi[ON],IcVce[Ii],hFEIc[Temp],Vce(sat)Ic[Temp]

#### Simulation Range

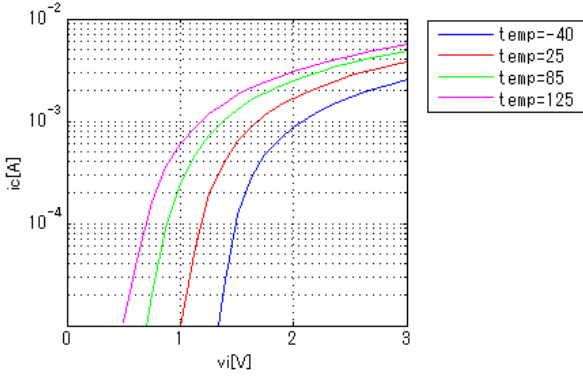
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	50	V
Base current (DC)	0	to	5	A
Temperature	-55	to	150	deg C

Simulation results are following.  
 Explanatory notes — : simulated

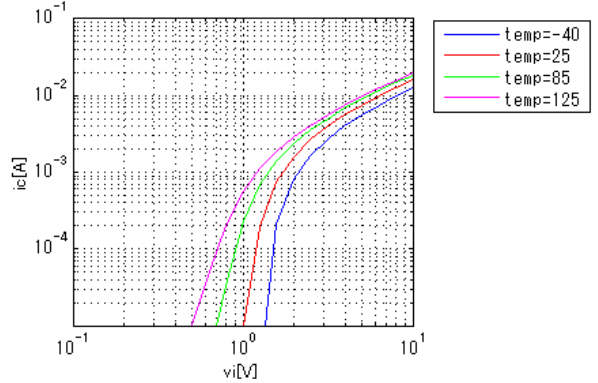
**IcVi[OFF]**

Vce = 5V



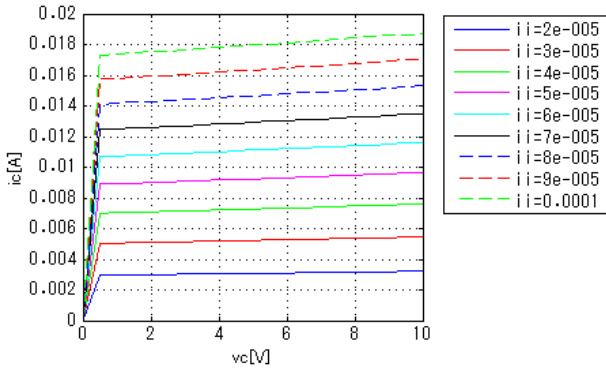
**IcVi[ON]**

Vce = 0.3V



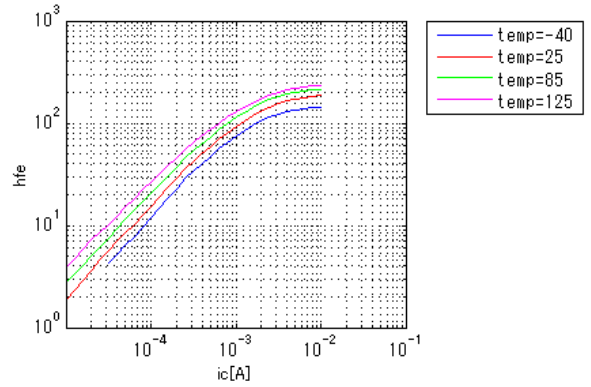
**IcVce[Ii]**

Temp. = 25deg C



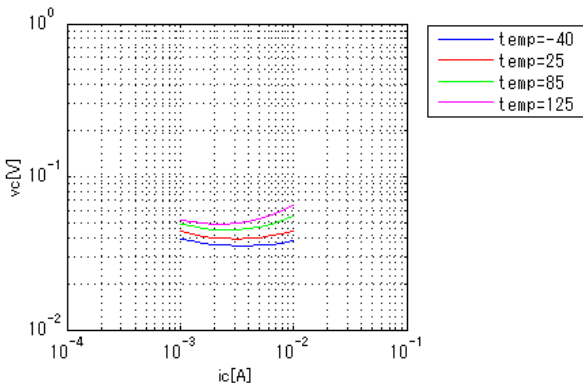
**hFEIc[Temp]**

Vce = 5V



**Vce(sat)Ic[Temp]**

IC/IB = 20



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