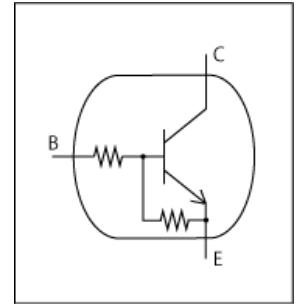


# PSpice Model

## BRT (Bias Resistor Transistor)

### KEC

### KRC101



### Model Information

**Model** A macro model based on Gummel-Poon model  
**Call Name** MDC\_KRC101\_PS  
**Pin Assign** 1:E 2:C 3:B  
**File List** Model Library MDC\_KRC101\_PS01.lib  
 Model Report MDC\_KRC101\_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 No:2
- Product name KRC101
- Company name KEC Corporation
- Characteristics IcVi[OFF],IcVi[ON],hFEIc[Temp],tr,tstg,tf

### Simulation Range

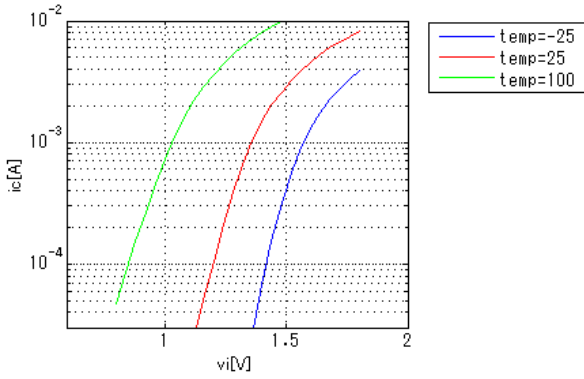
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	50	V
Base current (DC)	0	to	0.0018	A
Temperature	-55	to	150	deg C

Simulation results are following.  
 Explanatory notes — : simulated

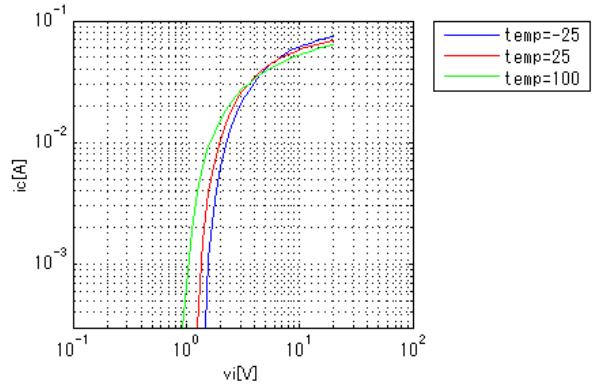
**IcVi[OFF]**

Vce = 5V



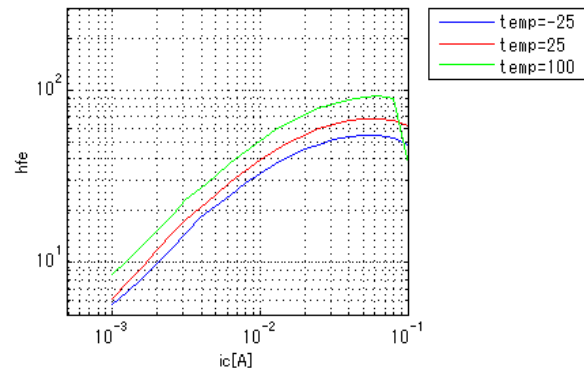
**IcVi[ON]**

Vce = 0.2V



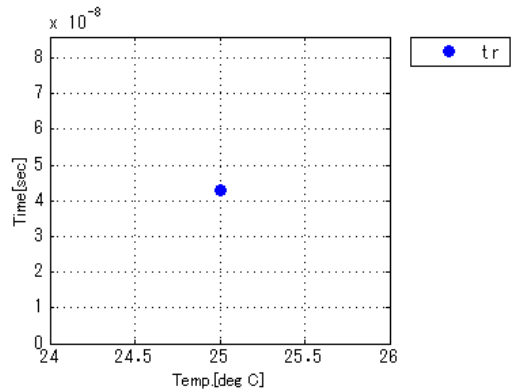
**hFEIc[Temp]**

Vce = 5V



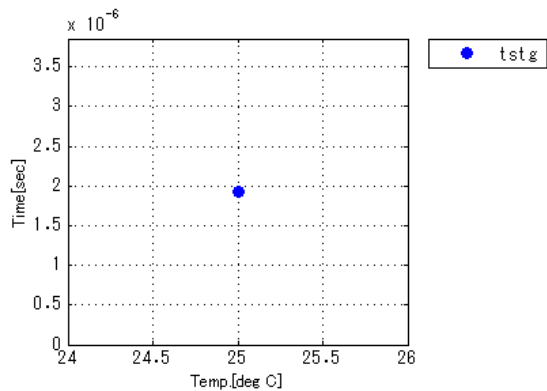
**tr**

VO = 5V, +VIN = 5V, -VIN = 0V, RL = 1000ohm



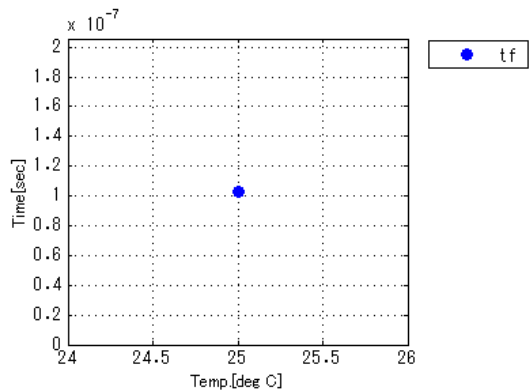
**tstg**

VO = 5V, +VIN = 5V, -VIN = 0V, RL = 1000ohm



**tf**

VO = 5V, +VIN = 5V, -VIN = 0V, RL = 1000ohm



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MoDeCH Inc.

Head Office

Location: Taiju-Seimei-Hachioji Bldg., 5-15 Yokoyama-cho, Hachioji-Shi, Tokyo 192-0081, Japan

Tel:+81-42-656-3360

E-Mail:[model-on-support@modech.co.jp](mailto:model-on-support@modech.co.jp)

URL:<http://www.modech.com/en/>