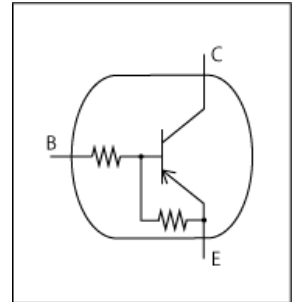


# LTspice Model

## BRT (Bias Resistor Transistor)

### KEC

### KRA301



### Model Information

**Model** A macro model based on Gummel-Poon model  
**Call Name** MDC\_KRA301\_LT  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_KRA301\_LT02.lib  
 Model Report MDC\_KRA301\_LT.pdf (this file)

**Verified Simulator Version** LTspice version XVII  
**Note**

### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Revision No : 5
- Product name KRA301
- Company name KEC Corporation
- Characteristics IcVi[OFF],IcVi[ON],hFEIc[Temp]

### Simulation Range

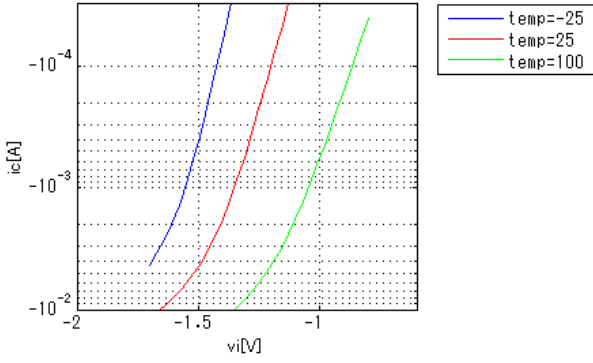
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	-50	V
Base current (DC)	0	to	-1.8m	A
Temperature	-55	to	150	deg C

Simulation results are following.  
 Explanatory notes — : simulated

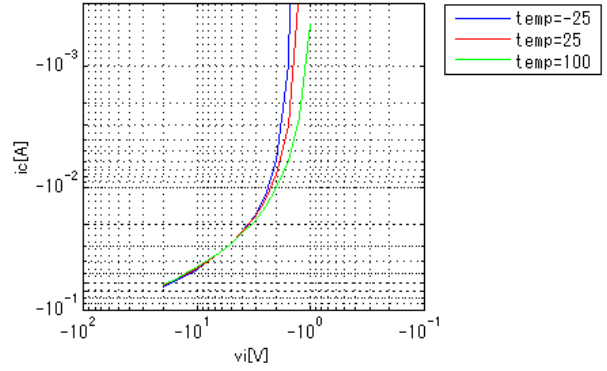
**IcVi[OFF]**

Vce = -5V



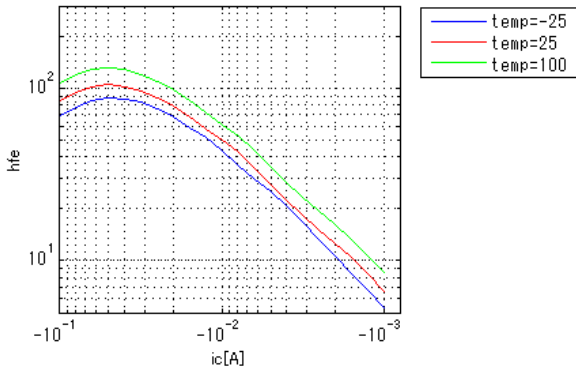
**IcVi[ON]**

Vce = -0.2V



**hFEIc[Temp]**

Vce = -5V



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