

## LTspice Model

### PNP

### SanKen

### 2SA1908



### Model Information

**Model** Gummel-Poon model  
**Call Name** MDC\_2SA1908\_LT  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_2SA1908\_LT01.lib  
 Model Report MDC\_2SA1908\_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 None
- Product name 2SA1908
- Company name Sanken Electric Co., Ltd.
- Characteristics  $I_{cVce}[ib], V_{ce(sat)}[b][ic], I_{cVbe}[Temp], hFEIc[Temp], fT[ic][Vce]$

### Simulation Range

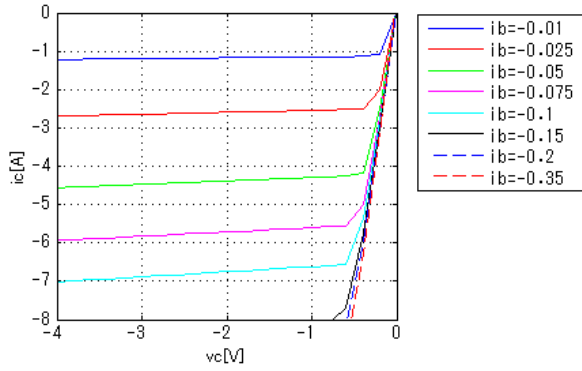
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

| Item                           | Range |    |      | Unit  |
|--------------------------------|-------|----|------|-------|
|                                | Min.  |    | Max. |       |
| Collector-emitter voltage (DC) | 0     | to | -120 | V     |
| Base current (DC)              | 0     | to | -3   | A     |
| Temperature                    | -55   | to | 150  | deg C |

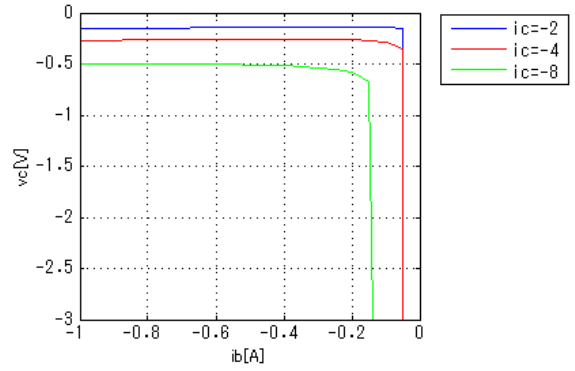
Simulation results are following.  
 Explanatory notes — : simulated

**IcVce[ib]**

Temp. = 25deg C

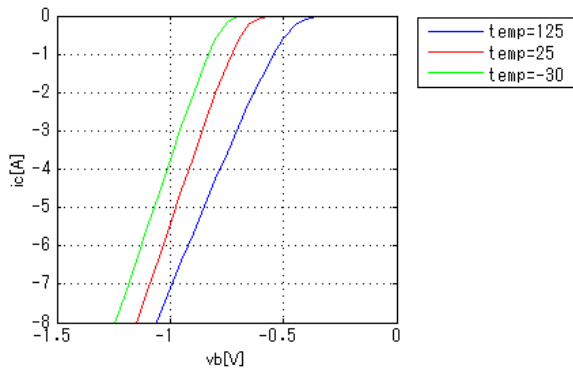


**Vce(sat)Ib[Ic]**



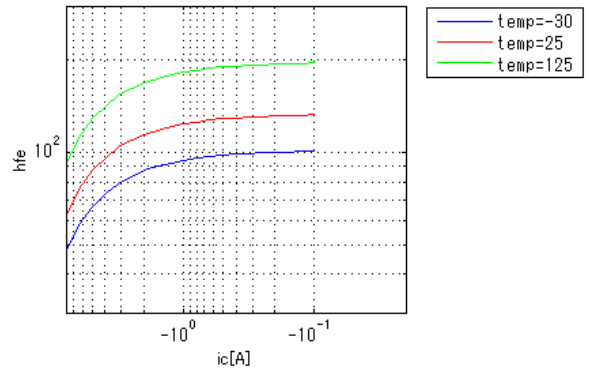
**IcVbe[Temp]**

Vce = -4V

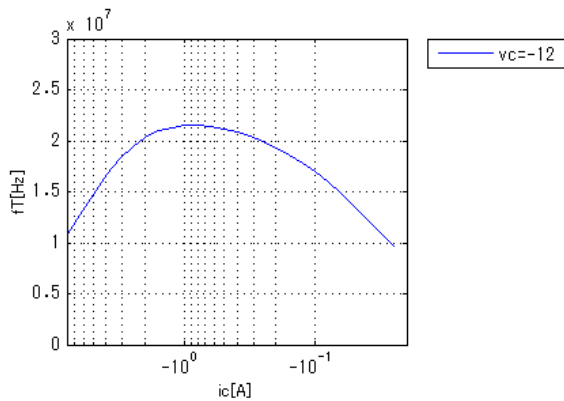


**hFEIc[Temp]**

Vce = -4V



**fT[Ic[Vce]]**



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