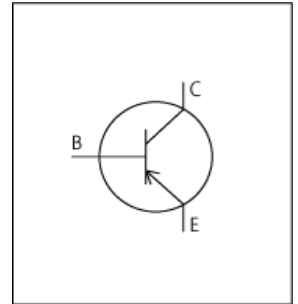


# PSpice Model

## PNP

### Panasonic

### DSA2401



#### Model Information

**Model** MEXTRAM  
**Call Name** MDC\_DSA2401\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_DSA2401\_PS01.lib  
 Model Report MDC\_DSA2401\_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 Ver. BJD
- Product name DSA2401
- Company name Panasonic Corporation
- Characteristics  $I_c V_{ce}[i_b], h_{FE} I_c[Temp], V_{ce}(sat) I_c[Temp], I_c V_{be}[Temp], C_{ob}, f_T I_c[V_{ce}], V_{be}(sat) I_c[Temp]$

#### Simulation Range

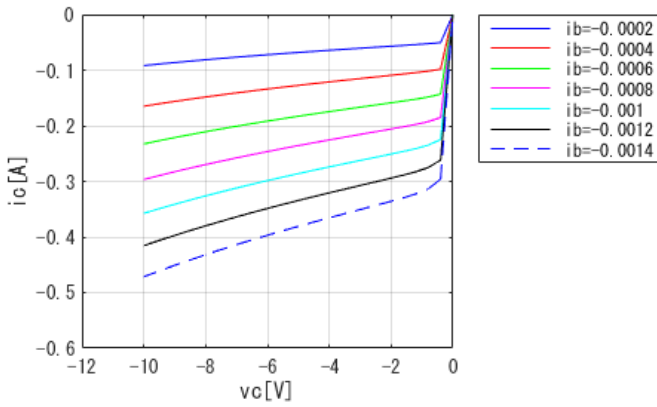
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	-10	V
Temperature	-55	to	150	deg C

Simulation results are following.  
 Explanatory notes — : simulated

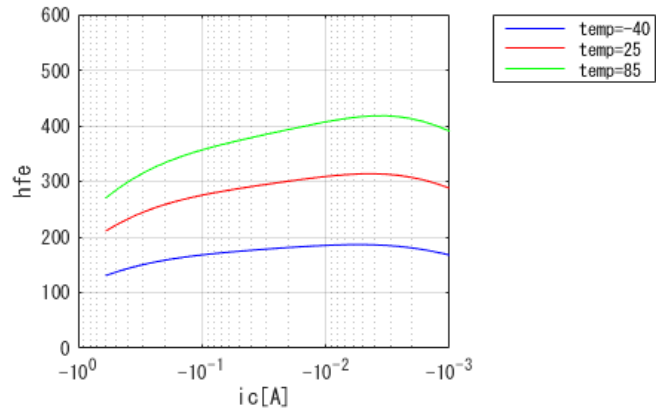
**IcVce[ib]**

Temp. = 25deg C



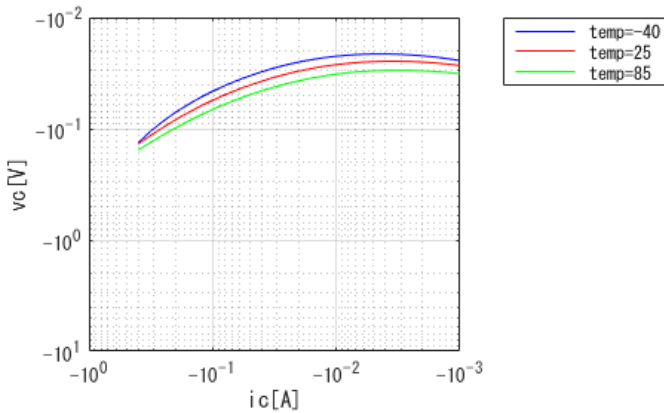
**hFEIc[Temp]**

Vce = -2V



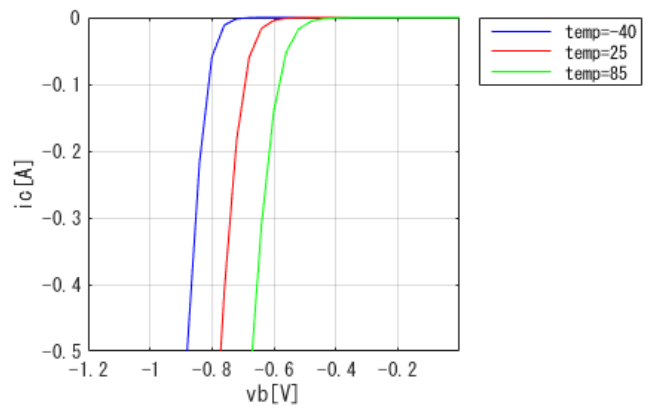
**Vce(sat)Ic[Temp]**

IC/IB = 50



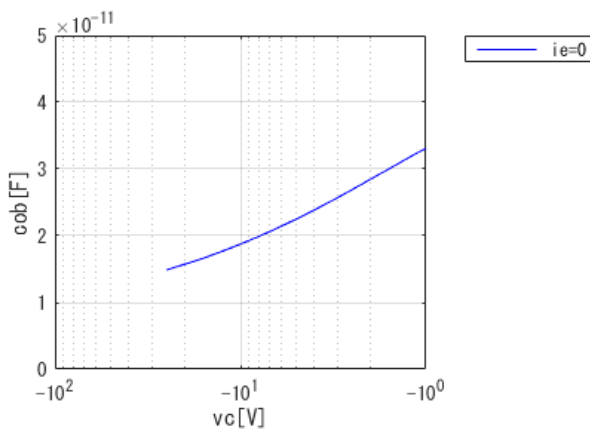
**IcVbe[Temp]**

Vce = -2V

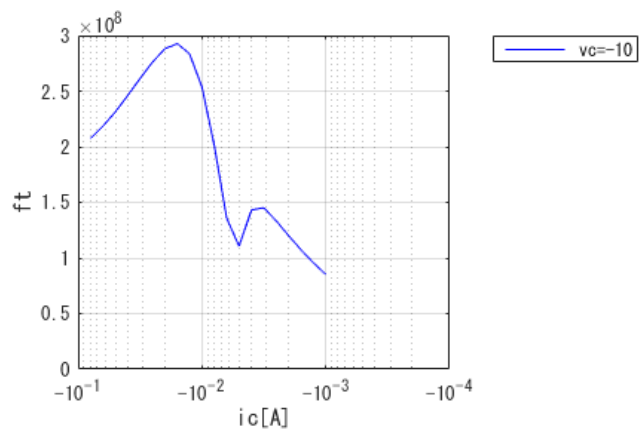


**Cob**

Freq. = 1MHz



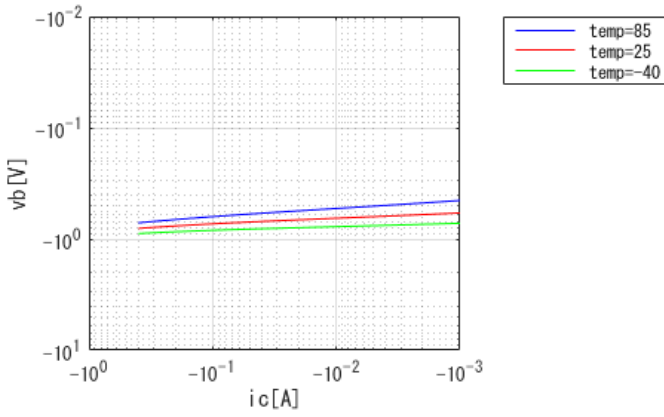
**fT Ic[Vce]**



Simulation results are following.  
 Explanatory notes — : simulated

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

IC/IB = 50



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