



Micro Commercial Components



Micro Commercial Components  
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**2SB1386-P**  
**2SB1386-Q**  
**2SB1386-R**

## Features

- Low Collector Saturation Voltage
- Excellent current-to-gain characteristics
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

## Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CE0}$	Collector-Emitter Voltage	-20	V
$V_{CBO}$	Collector-Base Voltage	-30	V
$V_{EBO}$	Emitter-Base Voltage	-6.0	V
$I_C$	Collector Current	-5.0	A
$I_{CP}$	Pulsed Collector Current	-10	A
$P_C$	Collector power dissipation	0.5	W
$T_J$	Junction Temperature	150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

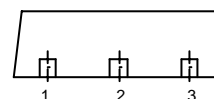
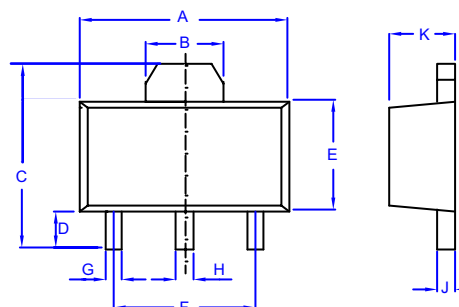
Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)CBO}$	Collector-base Breakdown Voltage ( $I_C = -50\mu\text{Adc}$ , $I_E = 0$ )	-30	---	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C = -1\text{mAdc}$ , $I_B = 0$ )	-20	---	---	Vdc
$V_{(BR)EBO}$	Emitter-base Breakdown Voltage ( $I_E = -50\mu\text{Adc}$ , $I_C = 0$ )	-6	---	---	Vdc
$I_{CBO}$	Collector-Base Cutoff Current ( $V_{CB} = -20\text{Vdc}$ , $I_E = 0$ )	---	---	-0.5	$\mu\text{Adc}$
$I_{EBO}$	Emitter-Base Cutoff Current ( $V_{EB} = -5\text{Vdc}$ , $I_C = 0$ )	---	---	-0.5	$\mu\text{Adc}$
$h_{FE(1)}$	DC Current Gain ( $I_C = -0.5\text{Adc}$ , $V_{CE} = -2.0\text{Vdc}$ )	82	---	390	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C = -4\text{Adc}$ , $I_B = -0.1\text{Adc}$ )	---	---	-1.0	Vdc
$f_T$	Transition Frequency ( $V_{CE} = -6\text{Vdc}$ , $I_C = -50\text{mAdc}$ , $f = 30\text{MHz}$ )	---	120	---	MHz
$C_{ob}$	Collector output capacitance ( $V_{CB} = -20\text{Vdc}$ , $I_E = 0$ , $f = 1.0\text{MHz}$ )	---	60	---	pF

## CLASSIFICATION OF $h_{FE(1)}$

Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	BHP	BHQ	BHR

## PNP Silicon Epitaxial Transistors

## SOT-89



1. Emitter
2. Collector
3. Base

DIM	DIMENSIONS				NOTES
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.061	----	1.55	----	REF.
C	.154	.165	3.91	4.25	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	----	3.00	----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	

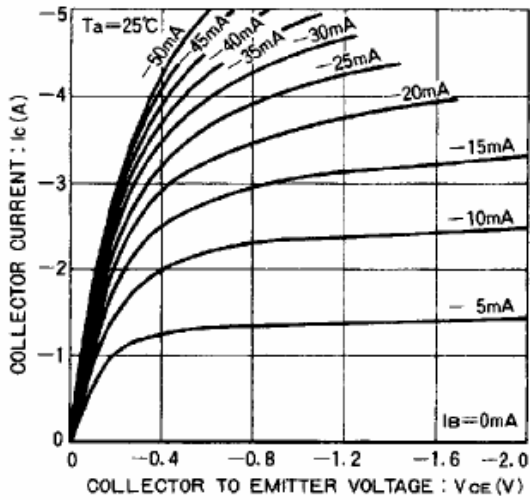


Figure 1

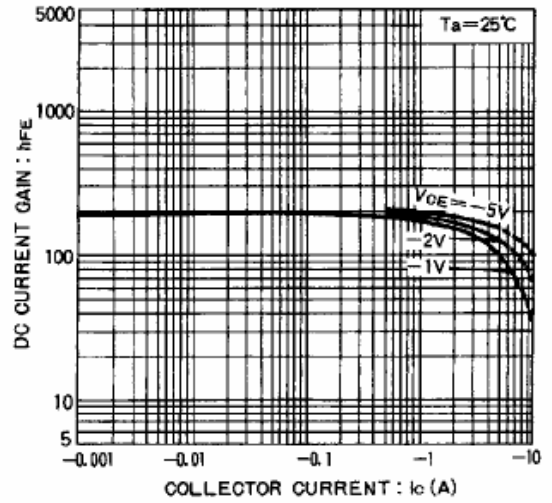


Figure 2

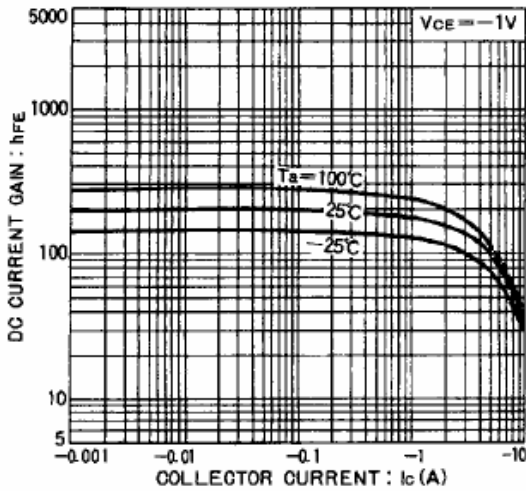


Figure 3

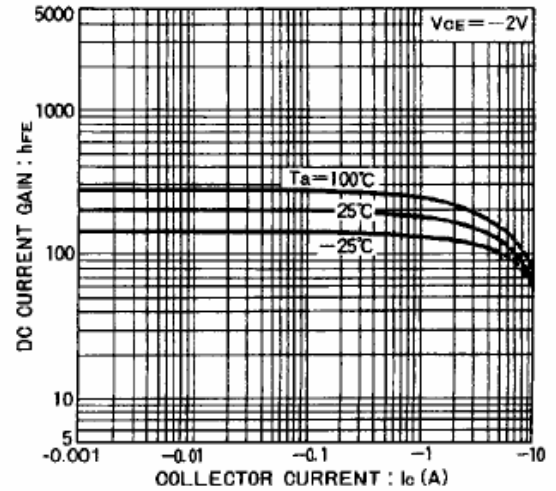


Figure 4

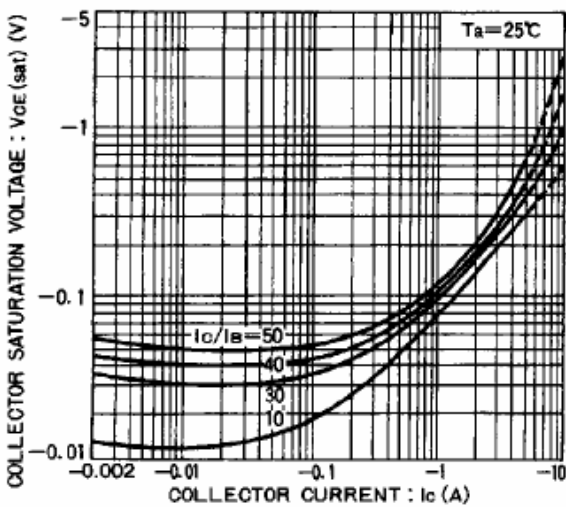


Figure 5

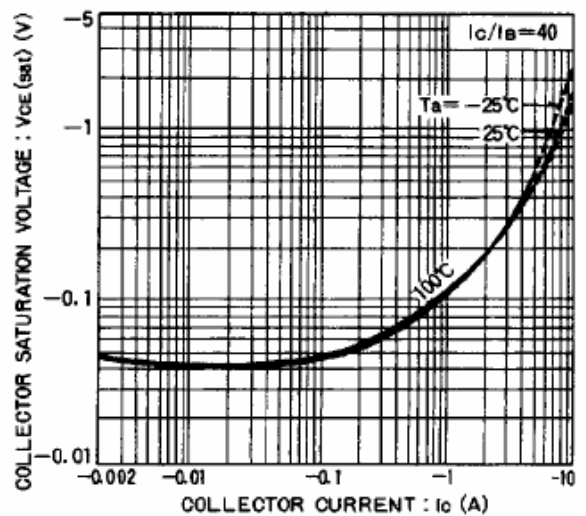
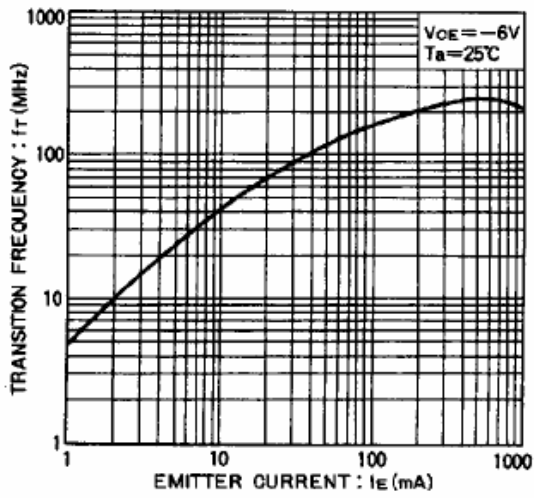
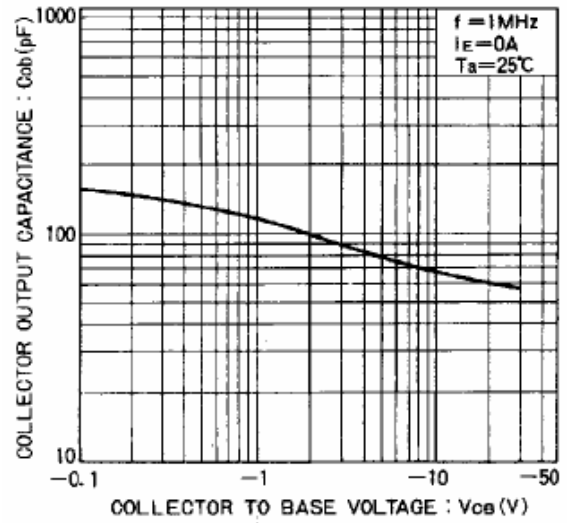


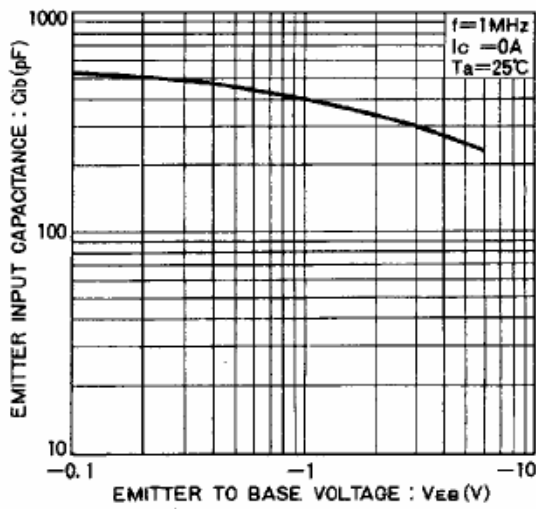
Figure 6



**Figure 7**



**Figure 8**



**Figure 9**



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 1Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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