



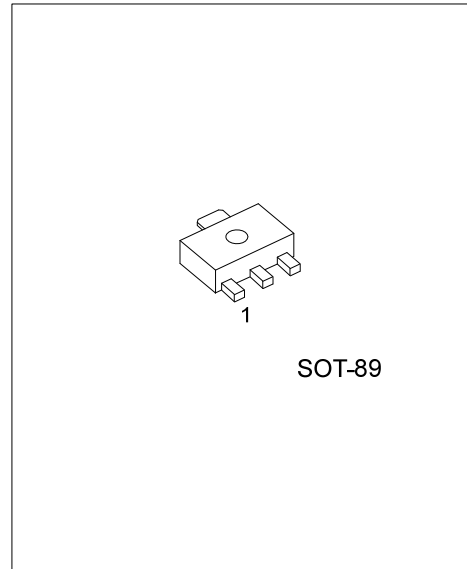
## 2SB1386

## PNP SILICON TRANSISTOR

### LOW FREQUENCY PNP TRANSISTOR

#### ■ FEATURES

- \* Excellent DC current gain characteristics
- \* Low  $V_{CE(SAT)}$   
 $V_{CE(SAT)} = -0.35V$  (Typ)  
 $(I_C/I_B = -4A/-0.1A)$



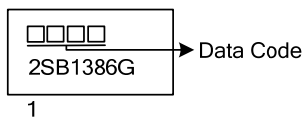
#### ■ ORDERING INFORMATION

Order Number	Package	Pin Assignment			Packing
		1	2	3	
2SB1386G-x-AB3-R	SOT-89	B	C	E	Tape Reel

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>2SB1386G-x-AB3-R</p>	<p>(1) R: Tape Reel  (2) AB3: SOT-89  (3) x: refer to Classification of <math>h_{FE}</math>  (4) G: Halogen Free and Lead Free</p>
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#### ■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (  $T_A=25^\circ\text{C}$ , unless otherwise specified )

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	-30	V
Collector-Emitter Voltage	$V_{CEO}$	-20	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector Current (DC)	$I_{C(DC)}$	-5	A
Collector Current (Pulse) (Note2)	$I_{C(PULSE)}$	-10	A
Collector Power Dissipation	$P_C$	0.5	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Single pulse,  $P_W=10\text{ms}$

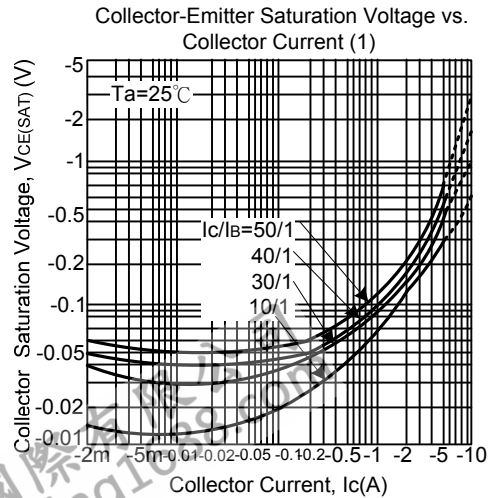
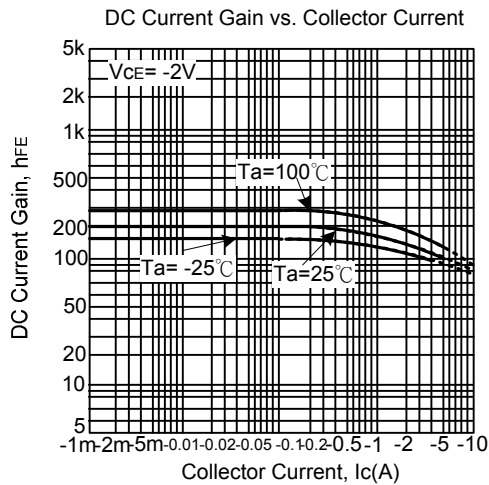
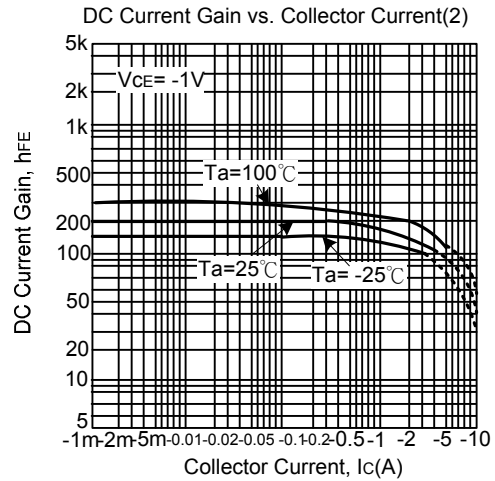
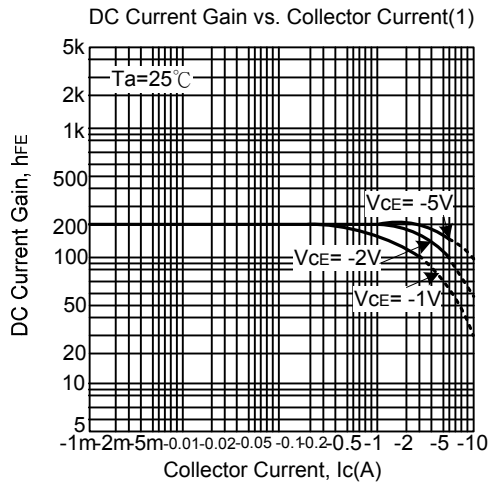
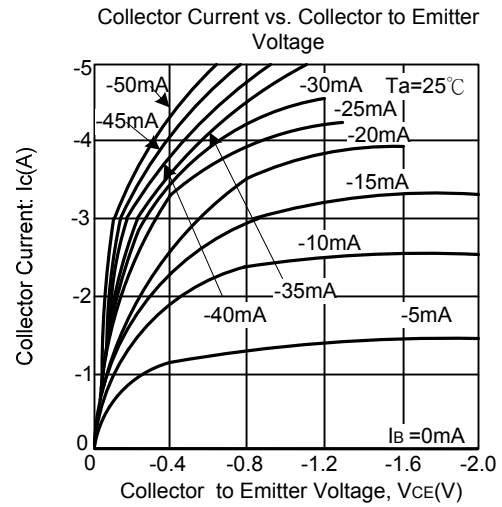
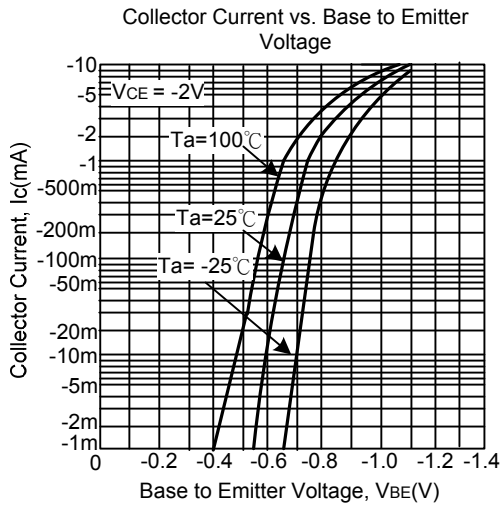
■ ELECTRICAL CHARACTERISTICS (  $T_A=25^\circ\text{C}$ , unless otherwise specified )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	$BV_{CBO}$	$I_C = -50\mu\text{A}$	-30			V
Collector Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = -1\text{mA}$	-20			V
Emitter Base Breakdown Voltage	$BV_{EBO}$	$I_E = -50\mu\text{A}$	-6			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C/I_B = -4A/-0.1A$			-1.0	V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -20\text{V}$			-0.5	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5\text{V}$			-0.5	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	82		390	
Transition Frequency	$f_T$	$V_{CE} = -6\text{V}, I_E = 50\text{mA}, f = 30\text{MHz}$		120		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = -20\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$		60		pF

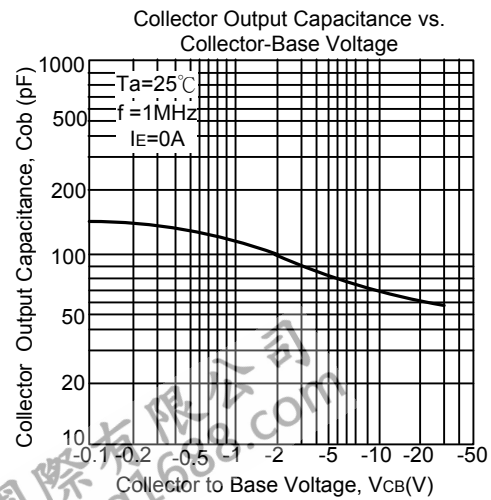
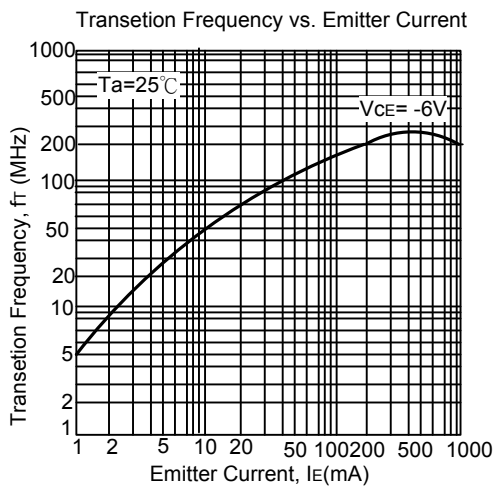
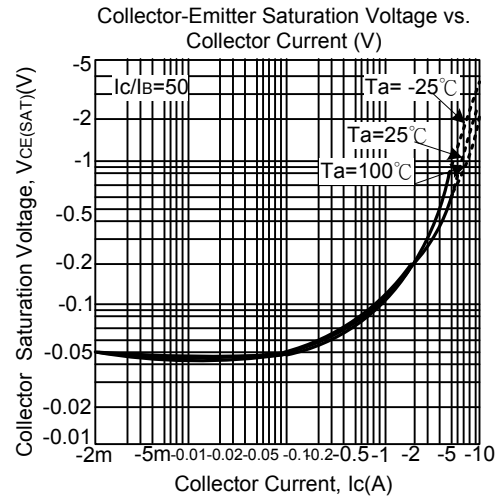
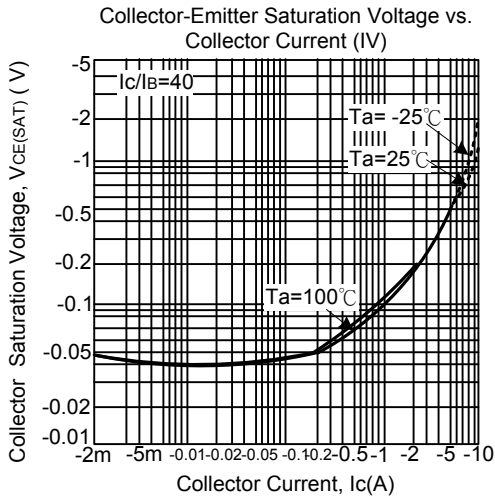
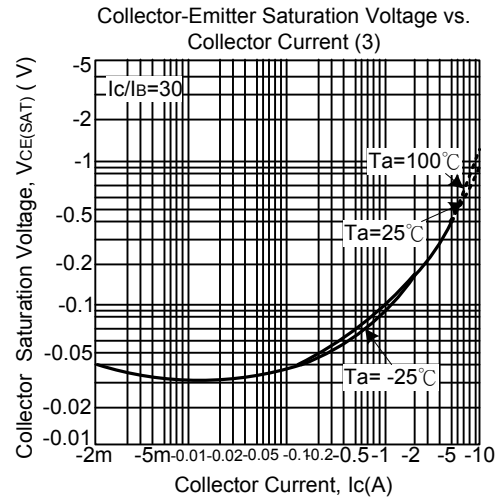
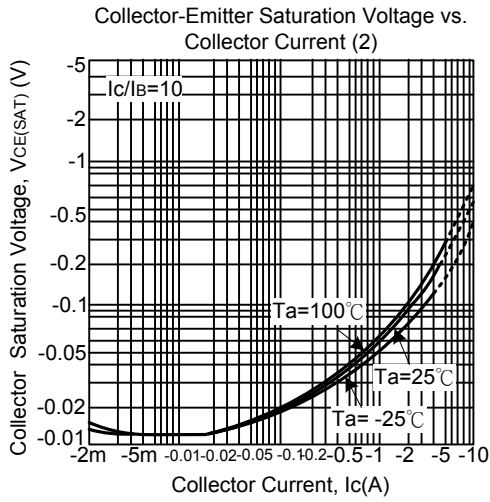
■ CLASSIFICATION OF  $h_{FE}$

RANK	P	Q	R
RANGE	82-180	120-270	180-390

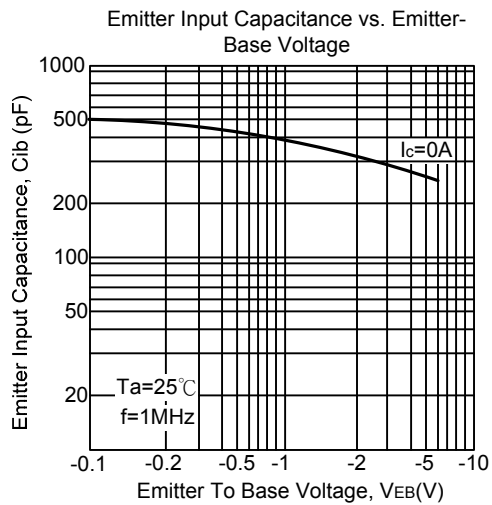
## TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



■ TYPICAL CHARACTERISTICS(Cont.)



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