Elektronische Bauelemente

2SB1386

-5A, -30V

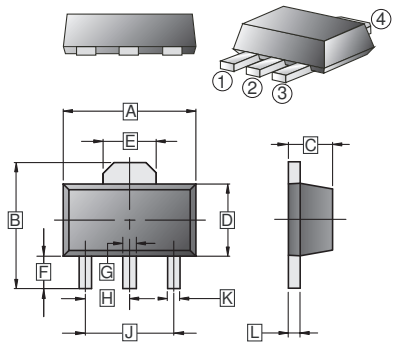
PNP Silicon Low Frequency Transistor

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low V_{CE}(sat)
- Excellent DC current gain characteristics
- Complements the 2SD2098

SOT-89



CLASSIFICATION OF h_{FE}

Product-Rank	2SB1386-P	2SB1386-Q	2SB1386-R
Range	82~180	120~270	180~390
Marking	BHP	BHQ	BHR

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-89	1K	7' inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.60	G	0.40	0.58
B	3.94	4.25	H	1.50 TYP	
C	1.40	1.60	J	3.00 TYP	
D	2.30	2.60	K	0.32	0.52
E	1.50	1.70	L	0.35	0.44
F	0.89	1.2			

ABSOLUTE MAXIMUM RATINGS (T_A = 25℃ 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 -Continuous	I_C	-5	A(DC)
		-10	A(Pulse) (1)
Collector Power Dissipation	P_D	0.5	W (2)
		2	
Junction & Storage Temperature	T_J, T_{STG}	150, -55~150	°C

Note:
(1) Single pulse, Pw=10ms.
(2) When mounted on a 40·40·0.7 mm ceramic board.

ELECTRICAL CHARACTERISTICS (T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-30	-	-	V	IC=-50μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-20	-	-	V	I_C= -1mA
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-6	-	-	V	I_E= -50μA
Collector cut-off current	I_{CBO}	-	-	-0.5	μA	V_{CB}= -20V
Emitter cut-off current	I_{EBO}	-	-	-0.5	μA	V_{EB}= -5V
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-1.0	V	I_C/I_B= -4A/-0.1A *
DC current gain *	h_{FE}	82	-	390		V_{CE}= -2V, I_C= -0.5A *
Transition frequency	f_T	-	120	-	MHz	V_{CE}= -6V, I_E= -50mA, f=30MHz
Output Capacitance	C_{OB}	-	60	-	pF	V_{CB}= -20V, I_E=0, f=1MHz

*Measured using pulse current.

CHARACTERISTIC CURVES

●Electrical characteristic curves

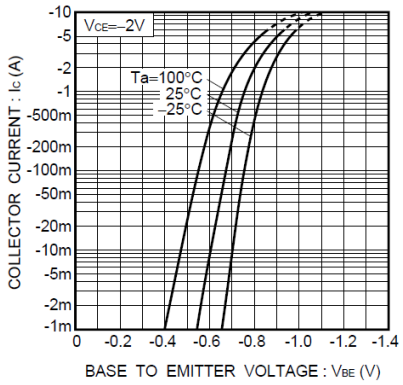


Fig.1 Grounded emitter propagation characteristics

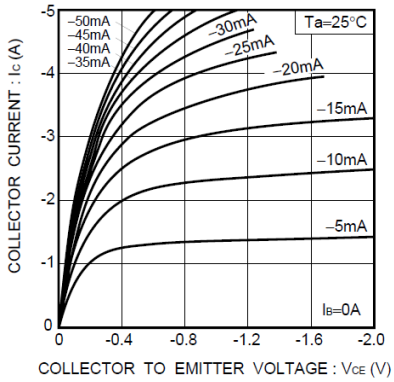


Fig.2 Grounded emitter output characteristics

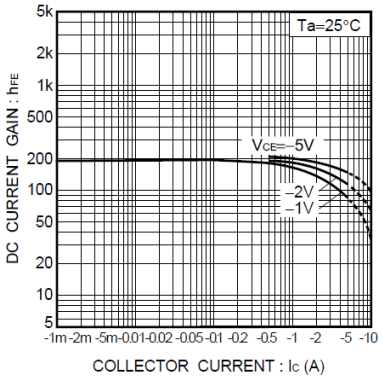


Fig.3 DC current gain vs. collector current (I)

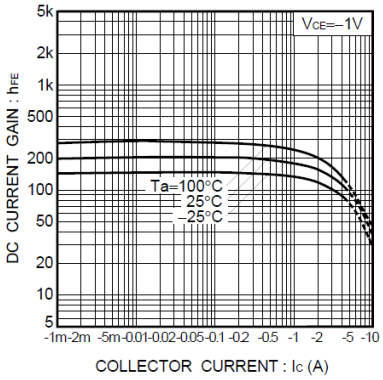


Fig.4 DC current gain vs. collector current (II)

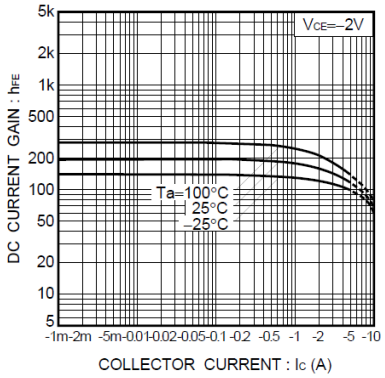


Fig.5 DC current gain vs. collector current (III)

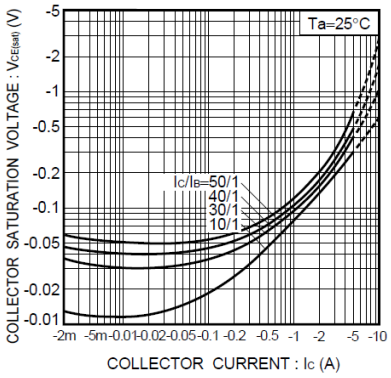


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

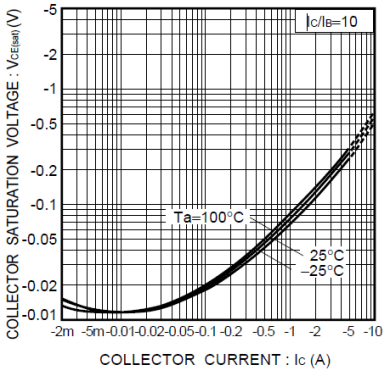


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

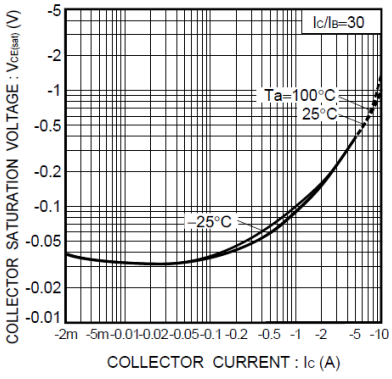


Fig.8 Collector-emitter saturation voltage vs. collector current (III)

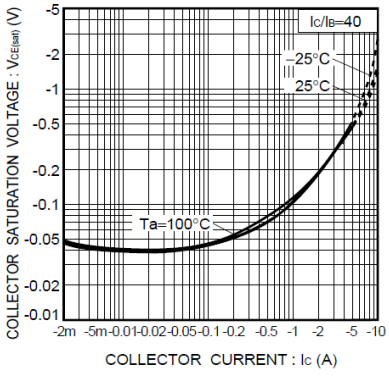


Fig.9 Collector-emitter saturation voltage vs. collector current (IV)

CHARACTERISTIC CURVES

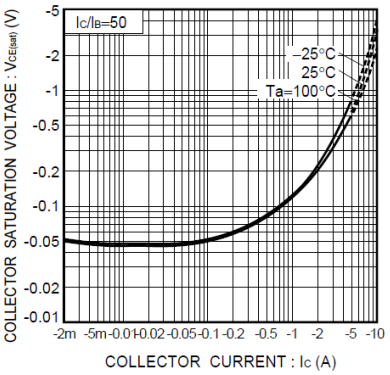


Fig.10 Collector-emitter saturation voltage vs. collector current (V)

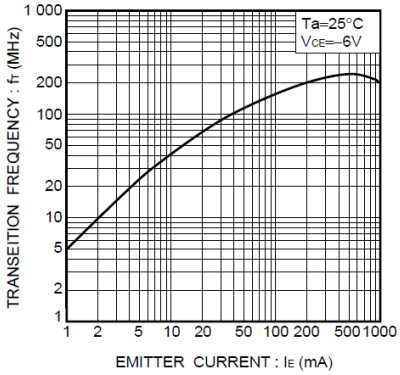


Fig.11 Gain bandwidth product vs. emitter current

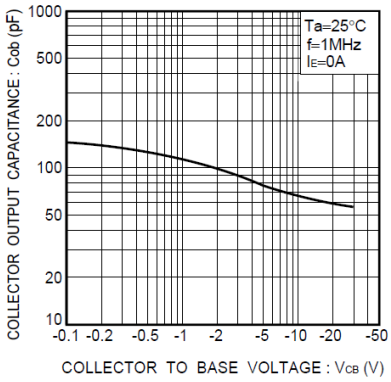


Fig.12 Collector output capacitance vs. collector-base voltage

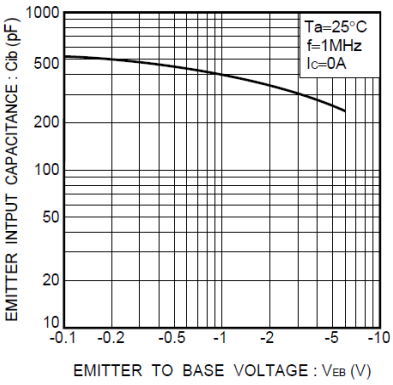


Fig.13 Emitter input capacitance vs. emitter-base voltage