

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

FEATURES

- Low Collector Saturation Voltage
- Excellent current-to-gain characteristics

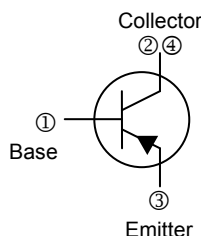
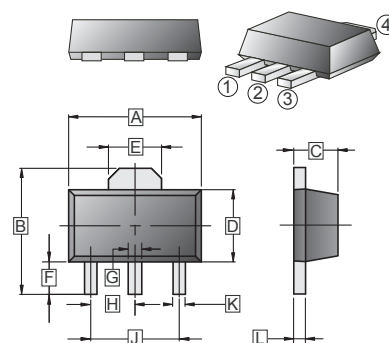
CLASSIFICATION OF h_{FE}

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

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7 inch

SOT-89



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	2.25	2.60	K	0.32	0.52
E	1.50	1.85	L	0.35	0.44
F	0.89	1.20			

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

Parameter	Symbol	Rating	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
Pulsed Collector Current ¹	I_{CP}	-10	A
Collector Power Dissipation	P_C	0.5	W
Junction and Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

Notes:

1. Single pulse, $P_w=10\text{ms}$.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector-base breakdown voltage	$V_{(BR)CBO}$	-30	-	-	V	$I_C = -50\mu\text{A}, I_E = 0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-20	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-6	-	-	V	$I_E = -50\mu\text{A}, I_C = 0$
Collector cut-off current	I_{CBO}	-	-	-500	nA	$V_{CB} = -20\text{V}, I_E = 0$
Emitter cut-off current	I_{EBO}	-	-	-500	nA	$V_{EB} = -5\text{V}, I_C = 0$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-1	V	$I_C = -4\text{A}, I_B = -100\text{mA}$
DC current gain	h_{FE}	82	-	390		$V_{CE} = -2\text{V}, I_C = -500\text{mA}$
Transition frequency	f_T	-	120	-	MHz	$V_{CE} = -6\text{V}, I_C = -50\text{mA}, f = 30\text{MHz}$
Output Capacitance	C_{OB}	-	60	-	pF	$V_{CB} = -20\text{V}, I_E = 0, f = 1\text{MHz}$

CHARACTERISTIC CURVES

Static Characteristic

