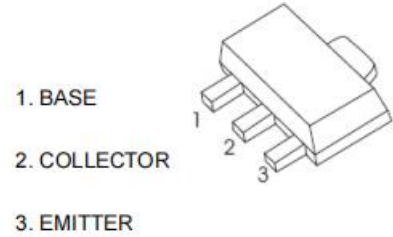


**SOT-89 Bipolar Transistor 双极型三极管**

■ **Features 特点**

PNP Low Saturation Voltage 低饱和压降

■ **Absolute Maximum Ratings 最大额定值**



Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	$V_{CBO}$	-30	V
Collector-Emitter Voltage 集电极发射极电压	$V_{CEO}$	-20	V
Emitter-Base Voltage 发射极基极电压	$V_{EBO}$	-6	V
Collector Current 集电极电流	$I_C$	-3000	mA
Power dissipation 耗散功率	$P_C(T_a=25^\circ\text{C})$	500	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	250	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	$T_J, T_{stg}$	-55to+150 $^\circ\text{C}$	

■ **Device Marking 产品打标**

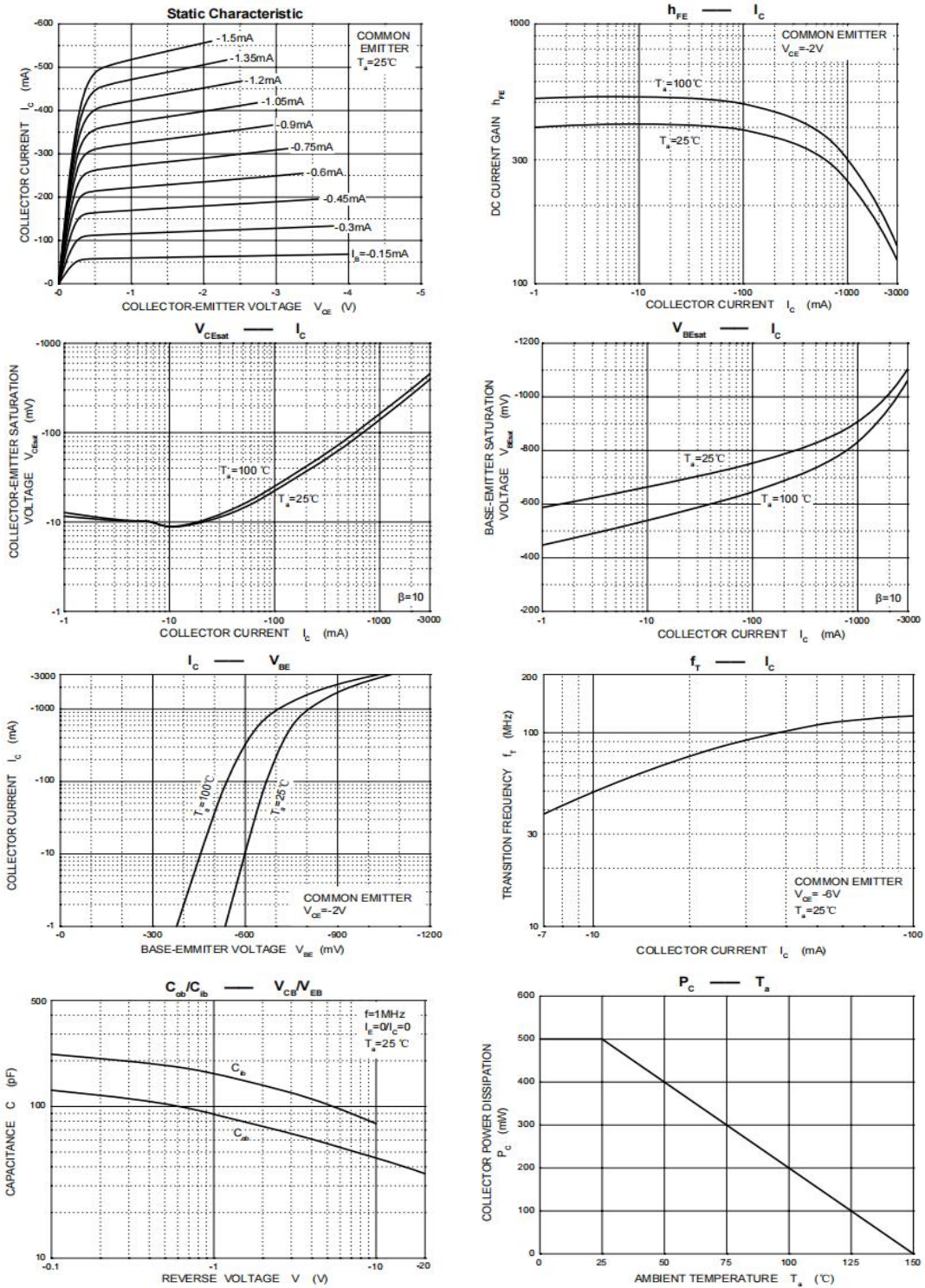
$H_{FE}$	82-180(P)	120-270(Q)	180-390(R)
Mark	BFP	BFQ	BFR

■ Electrical Characteristics 电特性

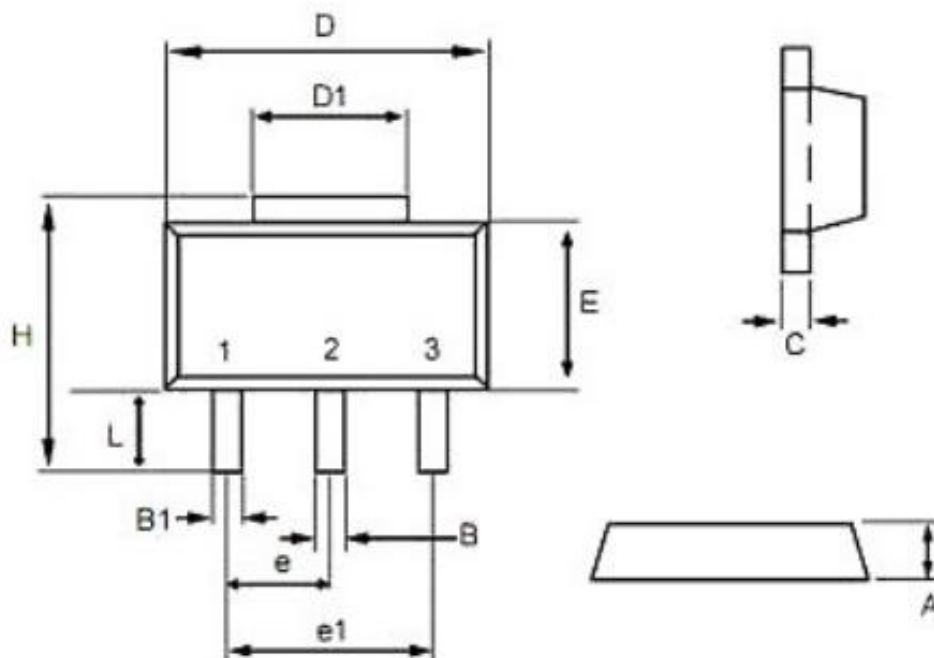
( $T_A=25^\circ\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^\circ\text{C}$ )

Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压( $I_C = -50\mu\text{A}$ , $I_E = 0$ )	$BV_{CBO}$	-30	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压( $I_C = -1\text{mA}$ , $I_B = 0$ )	$BV_{CEO}$	-20	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压( $I_E = -50\mu\text{A}$ , $I_C = 0$ )	$BV_{EBO}$	-6	—	—	V
Collector-Base Leakage Current 集电极基极漏电流( $V_{CB} = -20\text{V}$ , $I_E = 0$ )	$I_{CBO}$	—	—	-0.5	$\mu\text{A}$
Emitter-Base Leakage Current 发射极基极漏电流( $V_{EB} = -5\text{V}$ , $I_C = 0$ )	$I_{EBO}$	—	—	-0.5	$\mu\text{A}$
DC Current Gain 直流电流增益( $V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$ )	$H_{FE}$	82	—	390	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降( $I_C = -1.5\text{A}$ , $I_B = -0.15\text{A}$ )	$V_{CE(sat)}$	—	—	-0.45	V
Base-Emitter Saturation Voltage 基极发射极饱和压降( $I_C = -1.5\text{A}$ , $I_B = -0.15\text{A}$ )	$V_{BE(sat)}$	—	—	-1.2	V
Base-Emitter On Voltage 基极发射极导通电压( $V_{CE} = -10\text{V}$ , $I_C = -500\text{mA}$ )	$V_{BE(on)}$	—	—	-1.2	V
Transition Frequency 特征频率( $V_{CE} = -6\text{V}$ , $I_C = -50\text{mA}$ )	$f_T$	—	120	—	MHz
Output Capacitance 输出电容( $V_{CB} = -20\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$ )	$C_{ob}$	—	60	—	pF

■ Typical Characteristic Curve 典型特性曲线



■Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.40	1.60	0.055	0.063
B	0.40	0.56	0.016	0.022
B1	0.35	0.48	0.014	0.019
C	0.35	0.44	0.014	0.017
D	4.40	4.60	0.173	0.181
D1	1.35	1.83	0.053	0.072
e	1.45	1.55	0.057	0.061
e1	2.95	3.05	0.116	0.120
E	2.29	2.60	0.090	0.102
H	3.75	4.25	0.148	0.167
L	0.80	1.20	0.031	0.047