

## SOT-89 Bipolar Transistor 双极型三极管

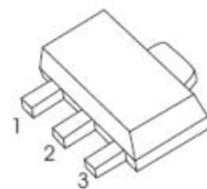
### ■ Features 特点

**PNP High Voltage 高压**

1. BASE

2. COLLECTOR

3. EMITTER



### ■ 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	$V_{CBO}$	-400	V
Collector-Emitter Voltage 集电极发射极电压	$V_{CEO}$	-400	V
Emitter-Base Voltage 发射极基极电压	$V_{EBO}$	-5	V
Collector Current 集电极电流	$I_C$	-200	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

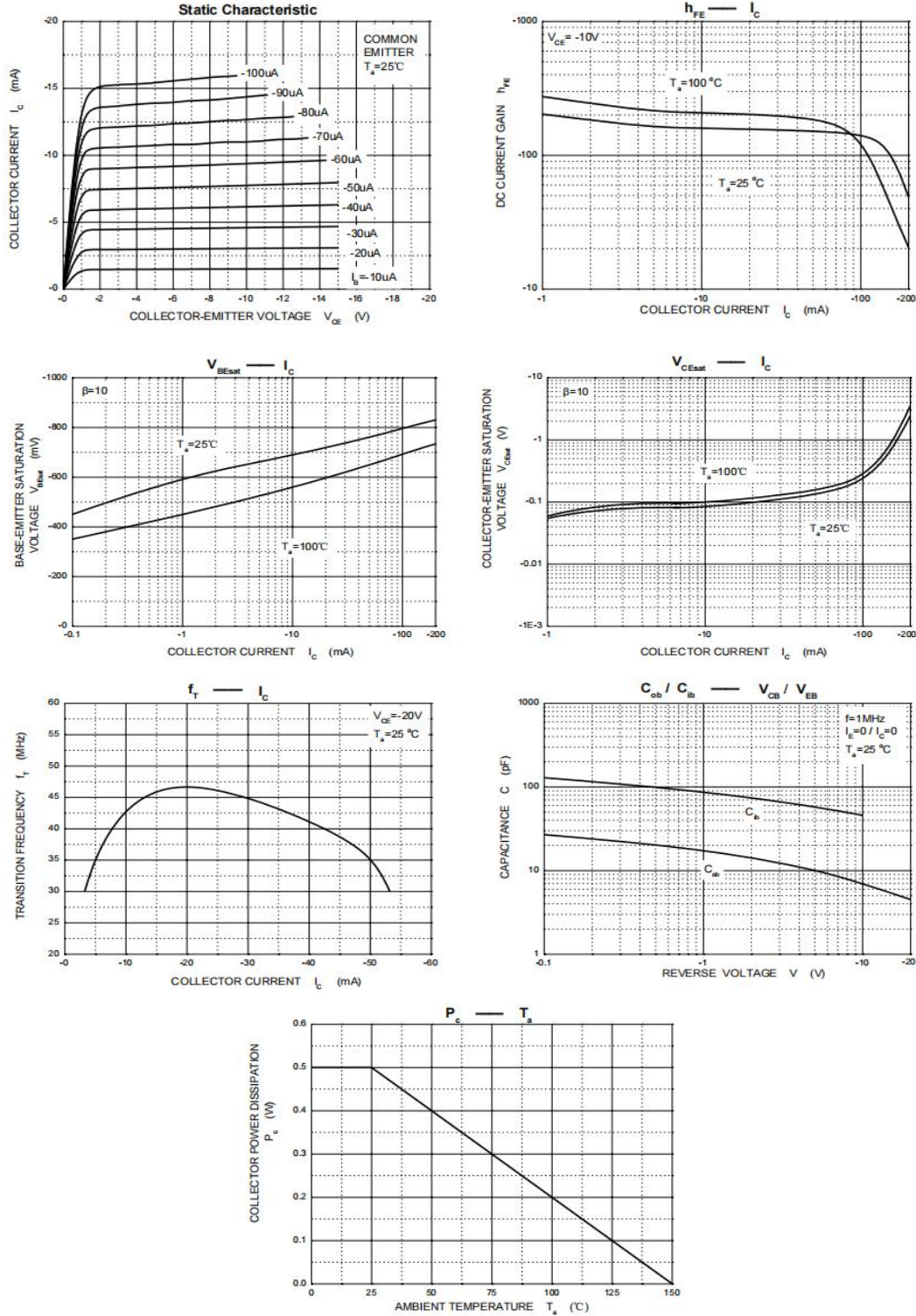
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■ Electrical Characteristics 电特性

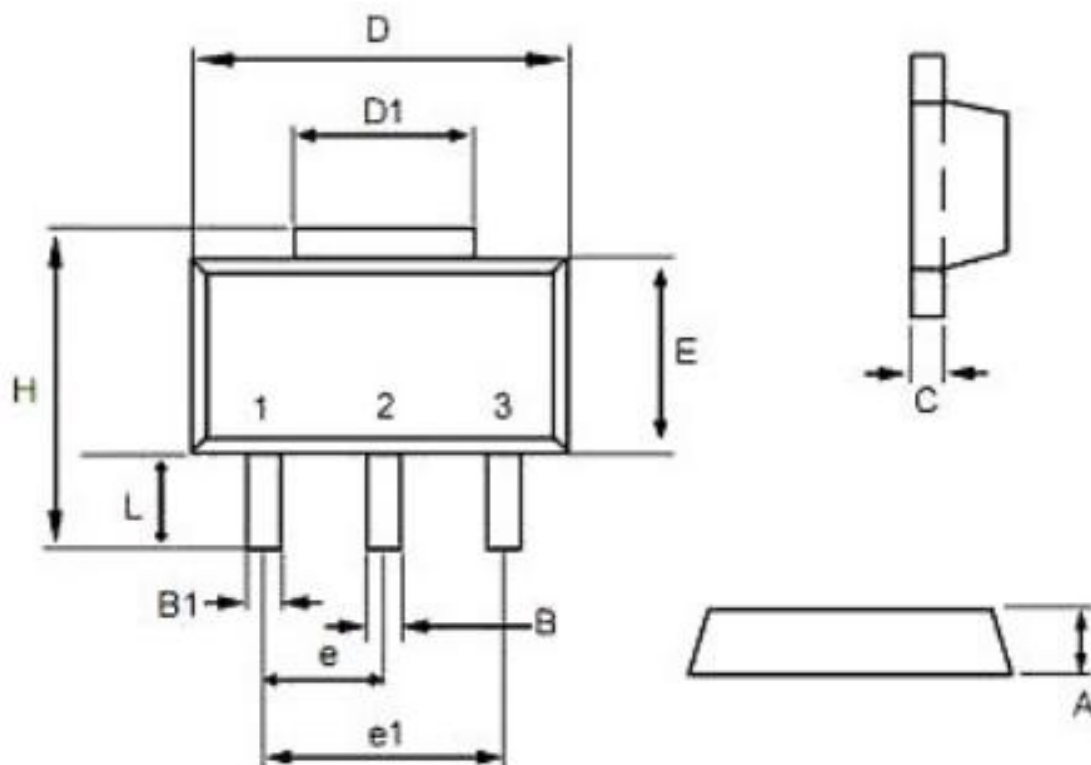
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

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( $I_C = -100\mu\text{A}$ , $I_E = 0$ )	$BV_{CBO}$	-400	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压( $I_C = -1\text{mA}$ , $I_B = 0$ )	$BV_{CEO}$	-400	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压( $I_E = -100\mu\text{A}$ , $I_C = 0$ )	$BV_{EBO}$	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流( $V_{CB} = -400\text{V}$ , $I_E = 0$ )	$I_{CBO}$	—	—	-100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流( $V_{CE} = -400\text{V}$ , $I_B = 0$ )	$I_{CEO}$	—	—	-5	$\mu\text{A}$
Emitter-Base Leakage Current 发射极基极漏电流( $V_{EB} = -5\text{V}$ , $I_C = 0$ )	$I_{EBO}$	—	—	-100	nA
DC Current Gain 直流电流增益( $V_{CE} = -10\text{V}$ , $I_C = -1\text{mA}$ )	$H_{FE(1)}$	70	—	—	
DC Current Gain 直流电流增益( $V_{CE} = -10\text{V}$ , $I_C = -10\text{mA}$ )	$H_{FE(2)}$	100	—	200	
DC Current Gain 直流电流增益( $V_{CE} = -10\text{V}$ , $I_C = -50\text{mA}$ )	$H_{FE(3)}$	40	—	—	
DC Current Gain 直流电流增益( $V_{CE} = -10\text{V}$ , $I_C = -100\text{mA}$ )	$H_{FE(4)}$	40	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降( $I_C = -10\text{mA}$ , $I_B = -1\text{mA}$ ) ( $I_C = -50\text{mA}$ , $I_B = -5\text{mA}$ )	$V_{CE(sat)}$	—	—	-0.2 -0.3	V
Base-Emitter Saturation Voltage 基极发射极饱和压降( $I_C = -10\text{mA}$ , $I_B = -1\text{mA}$ )	$V_{BE(sat)}$	—	—	-0.75	V
Transition Frequency 特征频率( $V_{CE} = -20\text{V}$ , $I_C = -10\text{mA}$ )	$f_T$	50	—	—	MHz
Output Capacitance 输出电容( $V_{CB} = -20\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$ )	$C_{ob}$	—	6	—	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