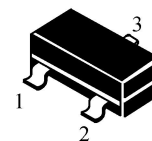


**SOT-23 Bipolar Transistor 双极型三极管**

**SOT-23**

■ **Features 特点**

- 1. BASE
- 2. EMITTER
- 3. COLLECTOR



**PNP General Purpose 通用**

■ **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	$V_{CBO}$	-100	V
Collector-Emitter Voltage 集电极发射极电压	$V_{CEO}$	-80	V
Emitter-Base Voltage 发射极基极电压	$V_{EBO}$	-5	V
Collector Current 集电极电流	$I_C$	-500	mA
Power dissipation 耗散功率	$P_C(T_a=25^\circ\text{C})$	150	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
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**

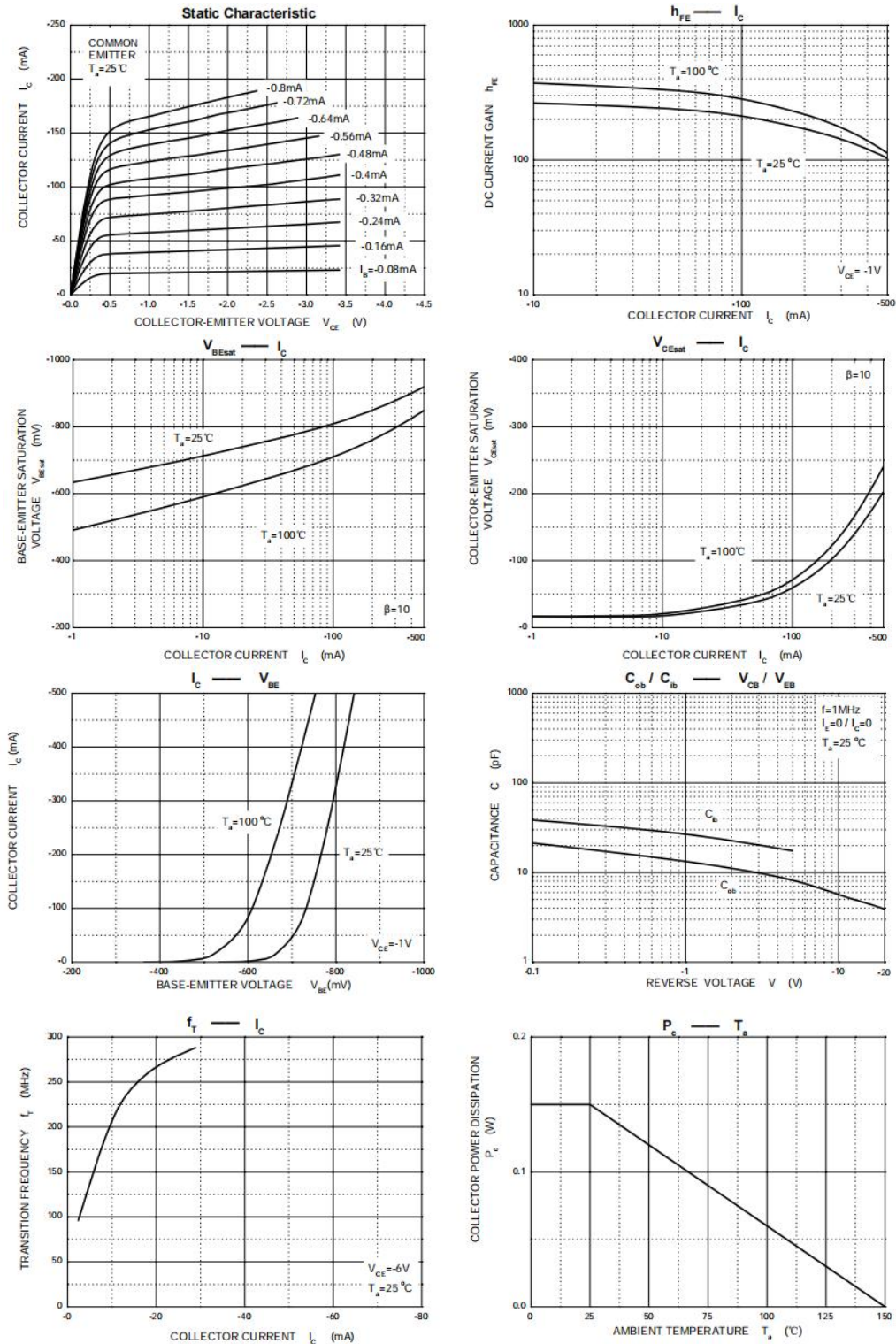
$H_{FE}$ (1)	120-270 (Q)	180-390 (R)
Mark	AKQ	AKR

■ Electrical Characteristics 电特性

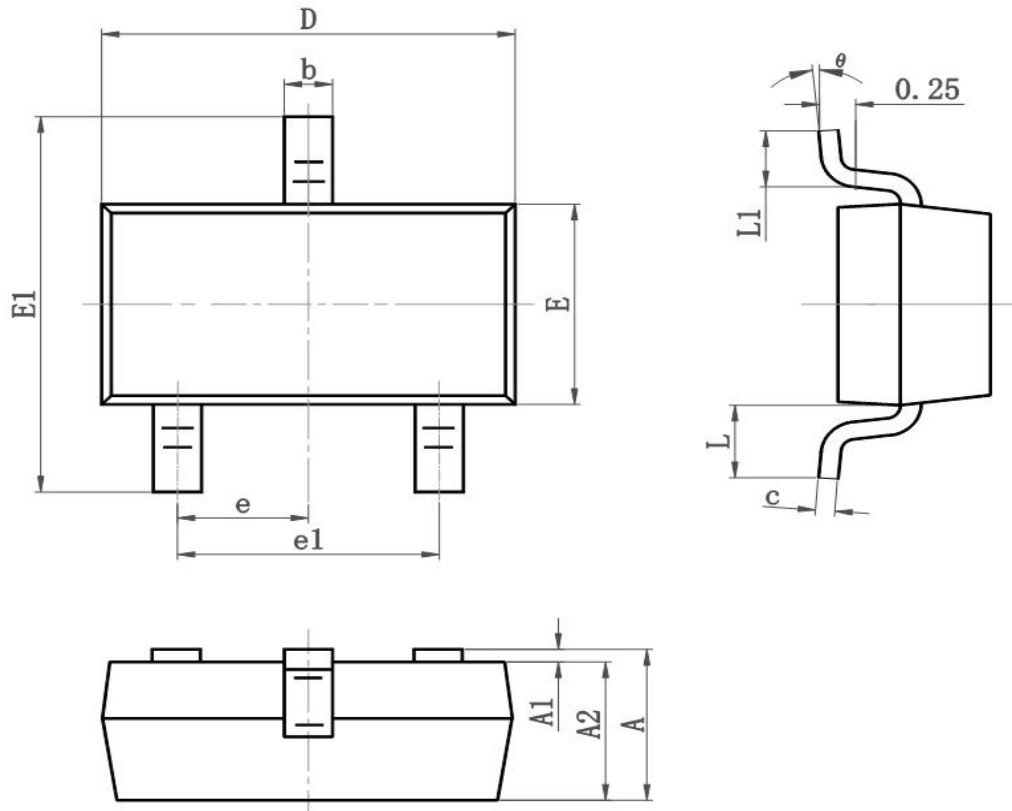
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

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( $I_C = -100\mu\text{A}$ , $I_E = 0$ )	$BV_{CBO}$	-100	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压( $I_C = -10\text{mA}$ , $I_B = 0$ )	$BV_{CEO}$	-80	—	—	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( $V_{CB} = -80\text{V}$ , $I_E = 0$ )	$I_{CBO}$	—	—	-0.1	$\mu\text{A}$
Emitter-Base Leakage Current 发射极基极漏电流( $V_{EB} = -5\text{V}$ , $I_C = 0$ )	$I_{EBO}$	—	—	-0.1	$\mu\text{A}$
DC Current Gain 直流电流增益 ( $V_{CE} = -3\text{V}$ , $I_C = -100\text{mA}$ )	$H_{FE} (1)$	120	—	390	
DC Current Gain 直流电流增益 ( $V_{CE} = -3\text{V}$ , $I_C = -500\text{mA}$ )	$H_{FE} (2)$	25	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 ( $I_C = -500\text{mA}$ , $I_B = -50\text{mA}$ )	$V_{CE(sat)}$	—	—	-0.5	V
Base-Emitter On Voltage 基极发射极导通压降 ( $V_{CE} = -3\text{V}$ , $I_C = -500\text{mA}$ )	$V_{BE}$	—	—	-1	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 ( $I_C = -500\text{mA}$ , $I_B = -50\text{mA}$ )	$V_{BE(sat)}$	—	—	-1	V
Transition Frequency 特征频率 ( $V_{CE} = -6\text{V}$ , $I_C = -20\text{mA}$ )	$f_T$	100	—	—	MHz
Output Capacitance 输出电容 ( $V_{CB} = -6\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$ )	$C_{ob}$	—	11	—	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	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.500	0.600	0.020	0.024
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°