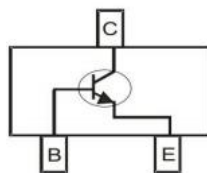


SOT-23 Bipolar Transistor 双极型三极管

■Features 特点

NPN 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}	80	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	60	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	5	V
Collector Current 集电极电流	I_C	1000	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	450	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	300	$^{\circ}\text{C}/\text{W}$
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

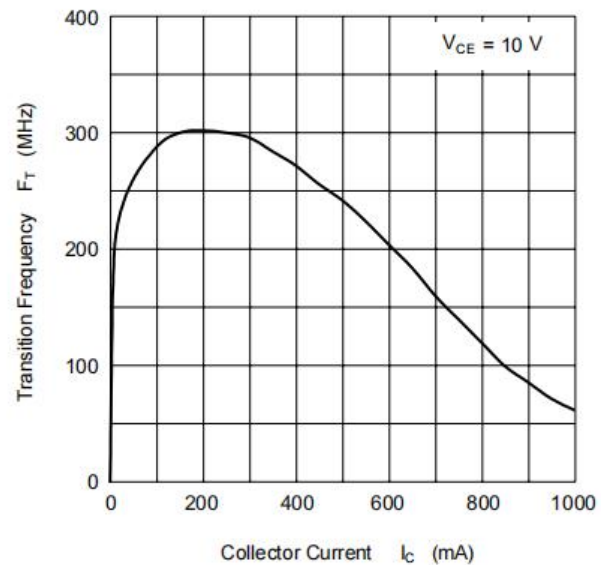
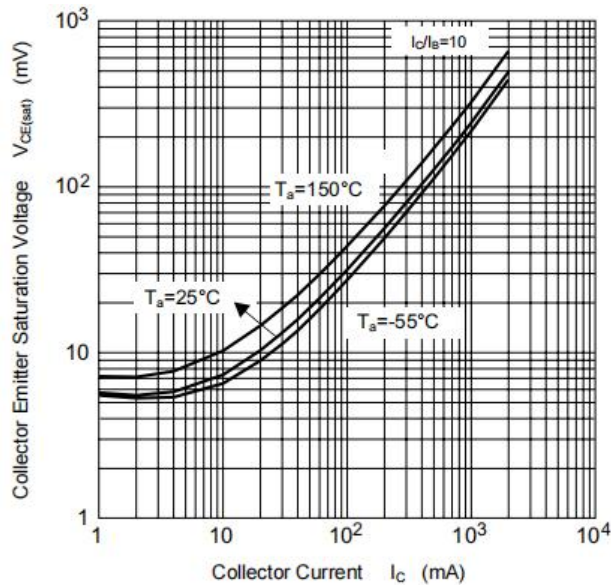
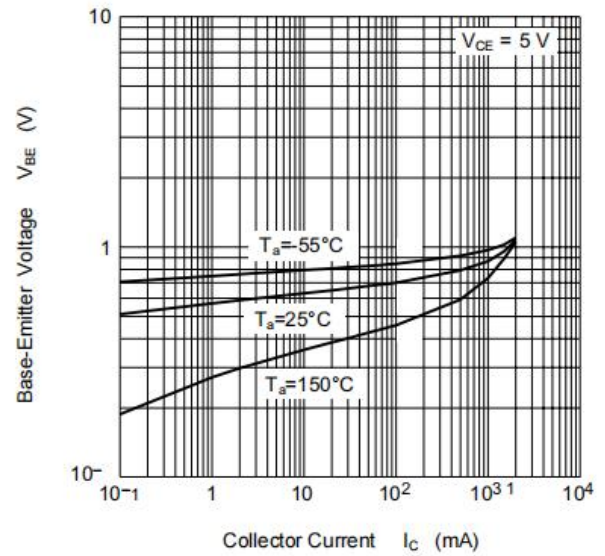
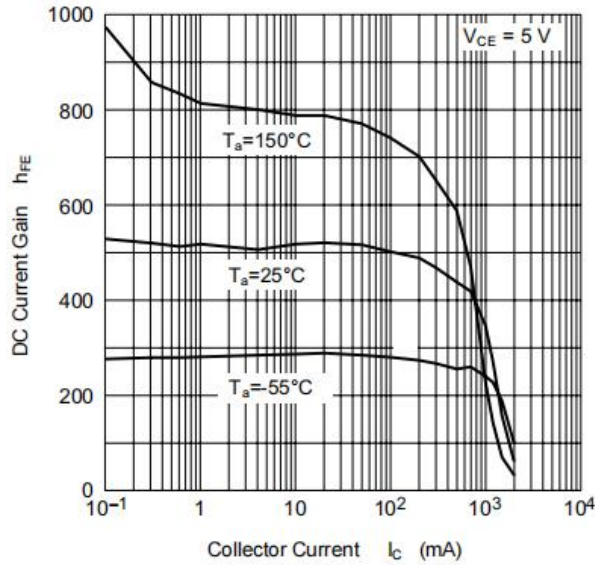
BSS4160=U5

■Electrical Characteristics 电特性

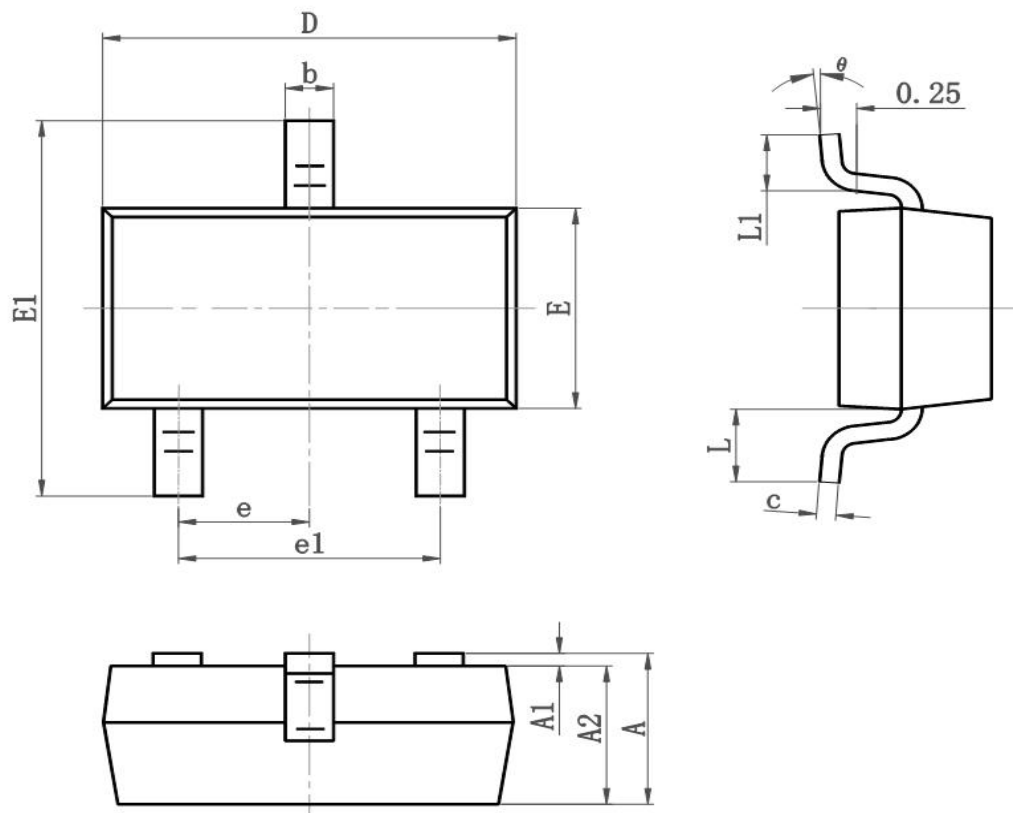
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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($I_C = 100\mu A$, $I_E = 0$)	BV_{CBO}	80	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压($I_C = 10mA$, $I_B = 0$)	BV_{CEO}	60	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压($I_E = 100\mu A$, $I_C = 0$)	BV_{EBO}	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流($V_{CB} = 60V$, $I_E = 0$)	I_{CBO}	—	—	100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流($V_{CE} = 48V$, $I_B = 0$)	I_{CEO}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流($V_{EB} = 5V$, $I_C = 0$)	I_{EBO}	—	—	100	nA
DC Current Gain($V_{CE} = 5V$, $I_C = 1mA$) 直流电流增益($V_{CE} = 5V$, $I_C = 500mA$) ($V_{CE} = 5V$, $I_C = 1000mA$)	H_{FE}	250 200 100	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降($I_C = 100mA$, $I_B = 1mA$) ($I_C = 500mA$, $I_B = 50mA$) ($I_C = 1000mA$, $I_B = 100mA$)	$V_{CE(sat)}$	—	—	0.11 0.14 0.25	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 ($I_C = 1000mA$, $I_B = 50mA$)	$V_{BE(sat)}$	—	—	1.1	V
Base-Emitter On Voltage 基极发射极导通电压 ($V_{CE} = 5V$, $I_C = 1000mA$)	$V_{BE(on)}$	—	—	0.9	V
Transition Frequency 特征频率($V_{CE} = 10V$, $I_C = 50mA$)	f_T	150	—	—	MHz
Output Capacitance 输出电容($V_{CB} = 10V$, $I_E = 0$, $f = 1MHz$)	C_{ob}	—	—	10	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
θ	0°	8°	0°	8°