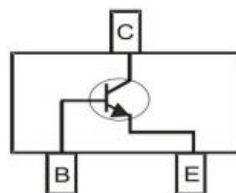


SOT-523 Bipolar Transistor 双极型三极管

■Features 特点

NPN 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}	40	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	25	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	$P_C(T_a=25^{\circ}\text{C})$	300	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	408	$^{\circ}\text{C}/\text{W}$
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

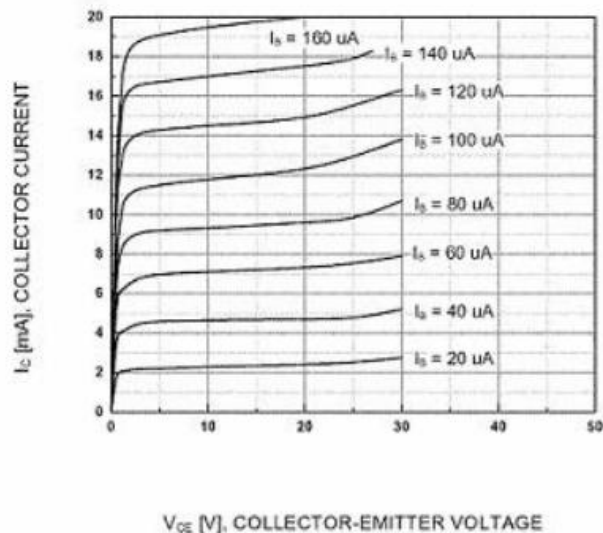
$H_{FE(1)}$	120-400
Mark	J3Y

■Electrical Characteristics 电特性

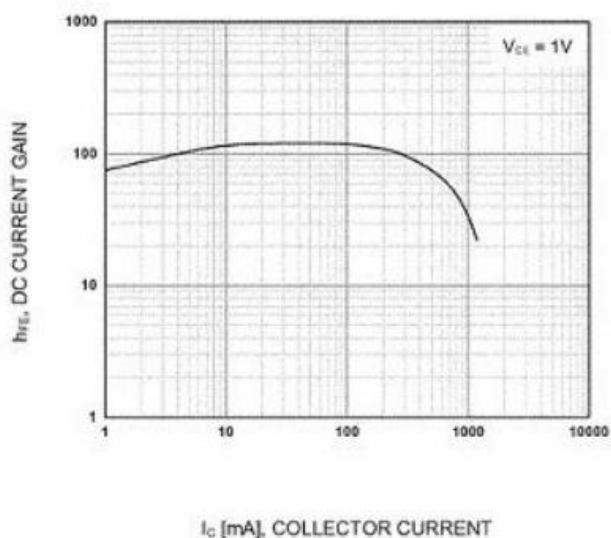
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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}	40	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压($I_C=1mA$, $I_B=0$)	BV_{CEO}	25	—	—	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($V_{CB}=40V$, $I_E=0$)	I_{CBO}	—	—	100	nA
Collector-Emitter Punch Throng Current 集电极发射极穿透电流($V_{CE}=20V$, $V_{BE}=0$)	I_{CES}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流($V_{EB}=3V$, $I_C=0$)	I_{EBO}	—	—	100	nA
DC Current Gain 直流电流增益($V_{CE}=1V$, $I_C=50mA$)	$H_{FE(1)}$	120	—	400	
DC Current Gain 直流电流增益($V_{CE}=1V$, $I_C=500mA$)	$H_{FE(2)}$	50	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 ($I_C=500mA$, $I_B=50mA$)	$V_{CE(sat)}$	—	—	0.6	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 ($I_C=500mA$, $I_B=50mA$)	$V_{BE(sat)}$	—	—	1.2	V
Transition Frequency 特征频率($V_{CE}=6V$, $I_C=20mA$)	f_T	150	—	—	MHz
Output Capacitance 输出电容($V_{CB}=10V$, $I_E=0$, $f=1MHz$)	C_{ob}	—	6	—	pF

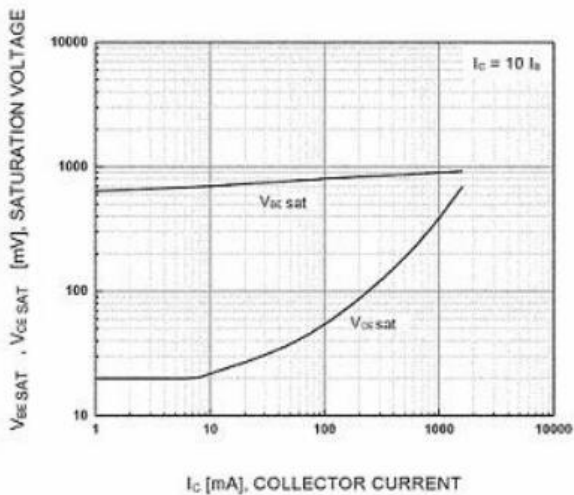
■ Typical Characteristic Curve 典型特性曲线



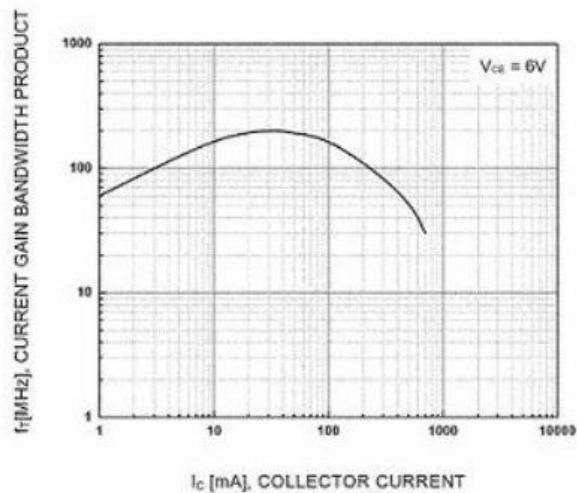
Static Characteristic



DC current Gain

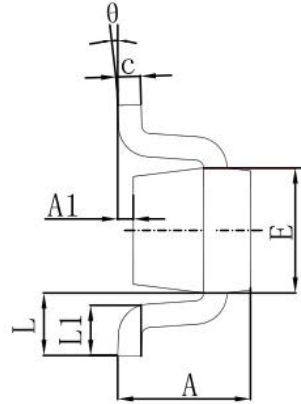
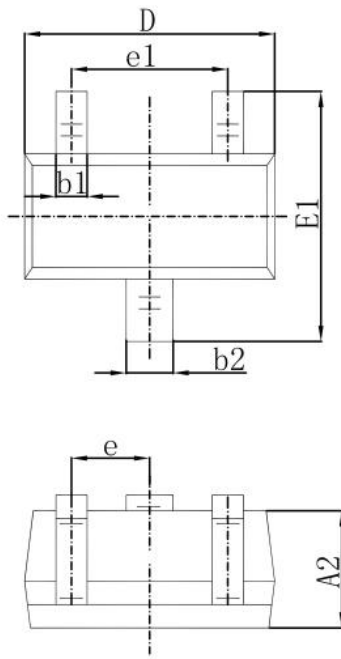


Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage



Current Gain Bandwidth Product

■Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°