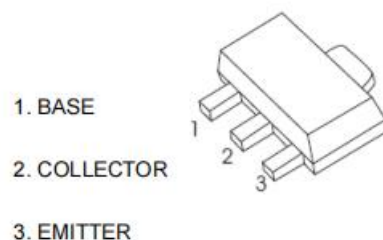


SOT-89 Bipolar Transistor 双极型三极管

■ Features 特点

NPN High Speed Switching 高速开关
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}	50	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	50	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	5	V
Collector Current 集电极电流	I_C	2000	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

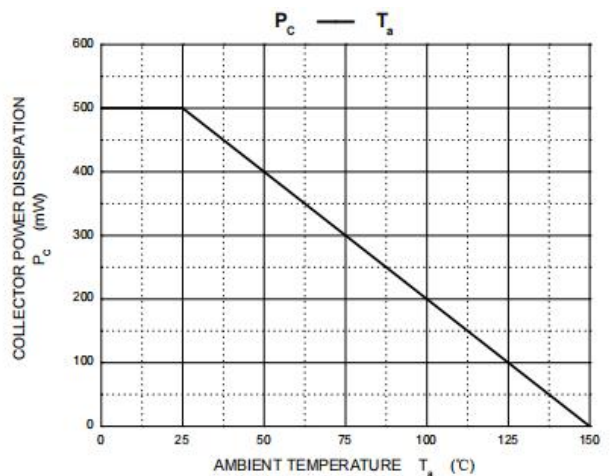
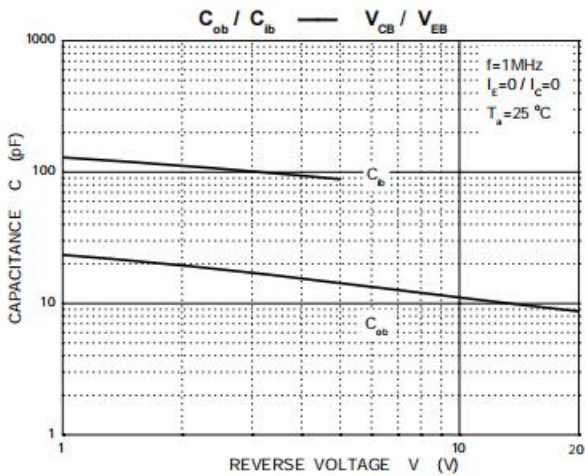
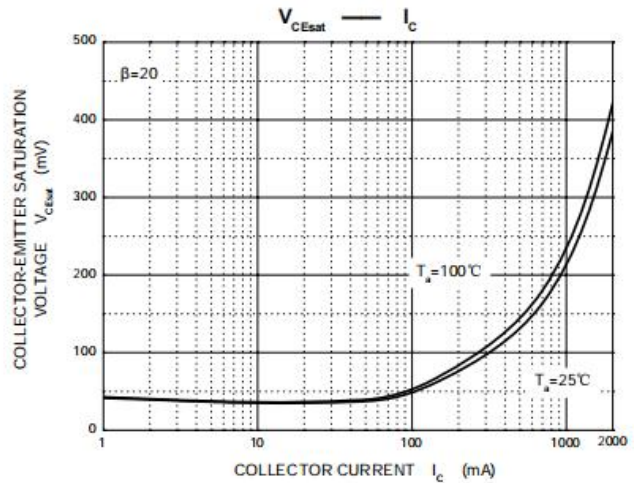
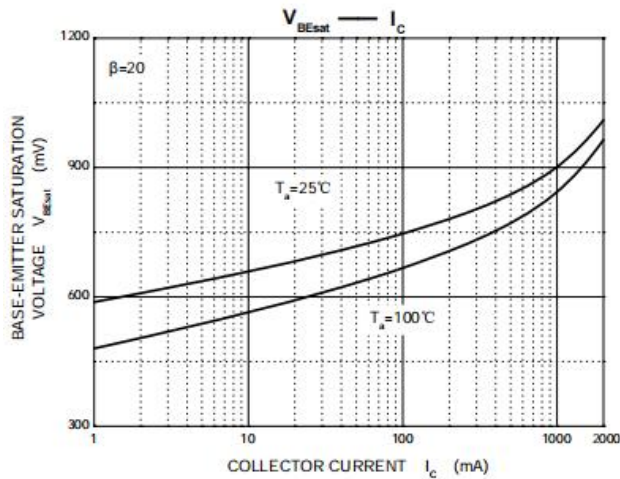
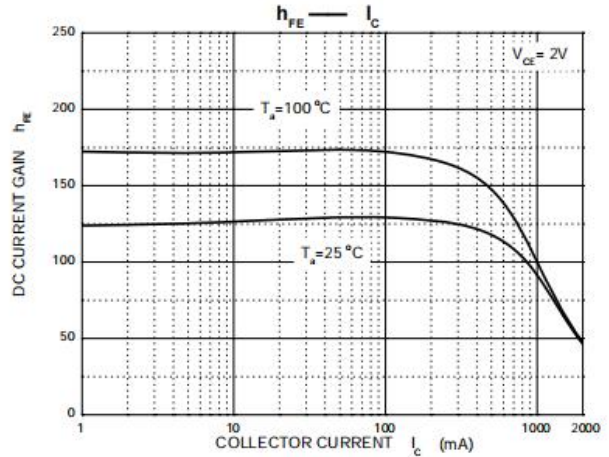
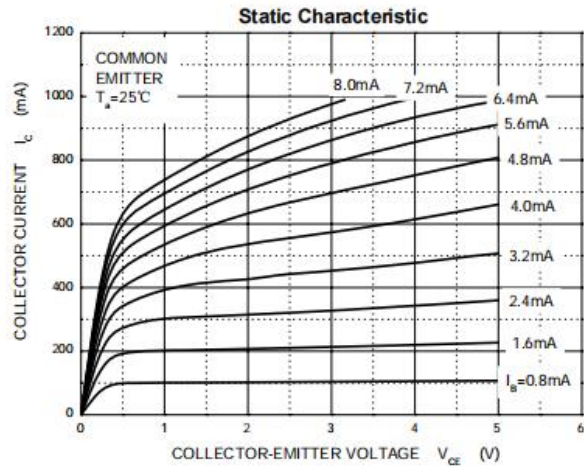
H_{FE}	70-140(O)	120-240(Y)
Mark	UO	UY

■ Electrical Characteristics 电特性

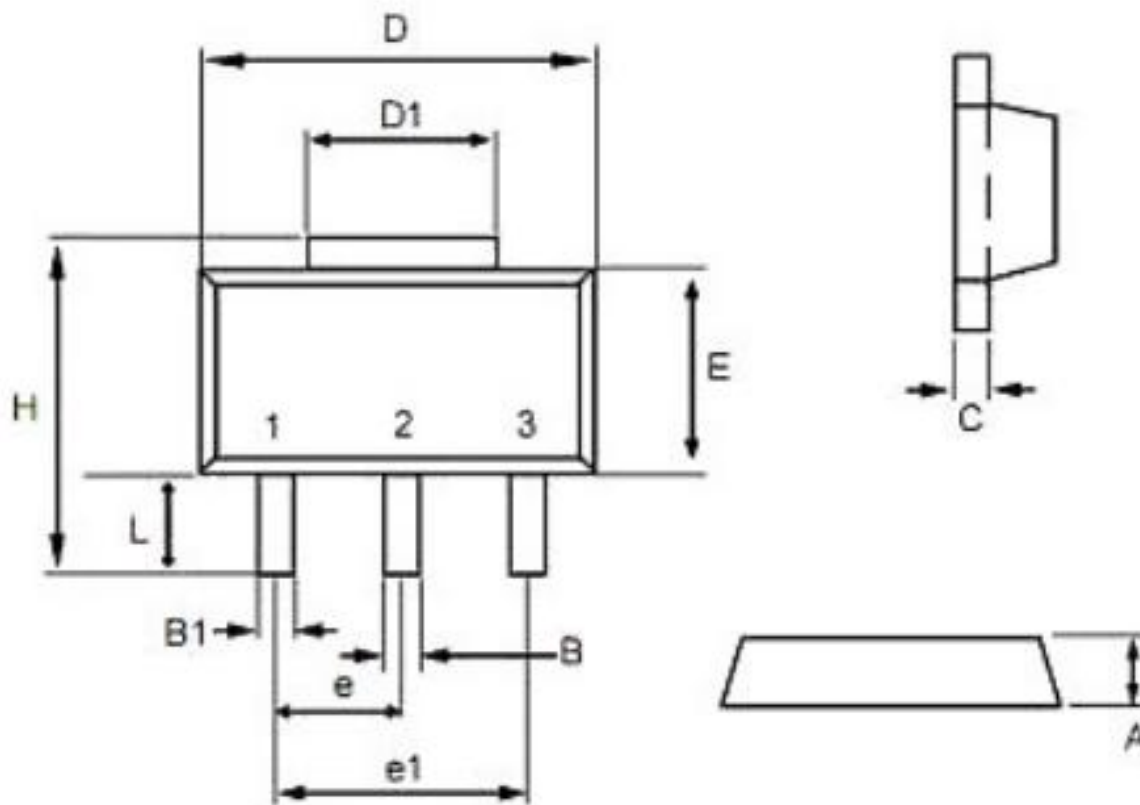
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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($I_C=1\text{mA}$, $I_E=0$)	BV_{CBO}	50	—	—	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}	50	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压($I_E=1\text{mA}$, $I_C=0$)	BV_{EBO}	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流($V_{CB}=50\text{V}$, $I_E=0$)	I_{CBO}	—	—	100	nA
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($V_{CE}=2\text{V}$, $I_C=500\text{mA}$) 直流电流增益($V_{CE}=2\text{V}$, $I_C=1500\text{mA}$)	H_{FE}	70 40	—	240	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降($I_C=1000\text{mA}$, $I_B=50\text{mA}$)	$V_{CE(sat)}$	—	—	500	mV
Base-Emitter Saturation Voltage 基极发射极饱和压降($I_C=1000\text{mA}$, $I_B=50\text{mA}$)	$V_{BE(sat)}$	—	—	1200	mV
Turn-on Time 开通时间 ($V_{CC}=30\text{V}$, $I_C=1\text{A}$, $I_{B1}=-I_{B2}=50\text{mA}$)	t_{on}	—	100	—	ns
Storage Time 贮存时间 ($V_{CC}=30\text{V}$, $I_C=1\text{A}$, $I_{B1}=-I_{B2}=50\text{mA}$)	t_s	—	1000	—	ns
Fall Time 下降时间 ($V_{CC}=30\text{V}$, $I_C=1\text{A}$, $I_{B1}=-I_{B2}=50\text{mA}$)	t_f	—	100	—	ns
Transition Frequency 特征频率($V_{CE}=2\text{V}$, $I_C=500\text{mA}$)	f_T	—	120	—	MHz
Output Capacitance 输出电容($V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$)	C_{ob}	—	30	—	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