

TO-92 Bipolar Transistor 双极型三极管

■Features 特点

NPN General Purpose 通用

■Absolute Maximum Ratings 最大额定值

TO-92

1. EMITTER

2. BASE

3. COLLECTOR



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}	45	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	5	V
Collector Current 集电极电流	I_C	100	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	450	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	278	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}\text{C}$	

■Device Rank 产品分档

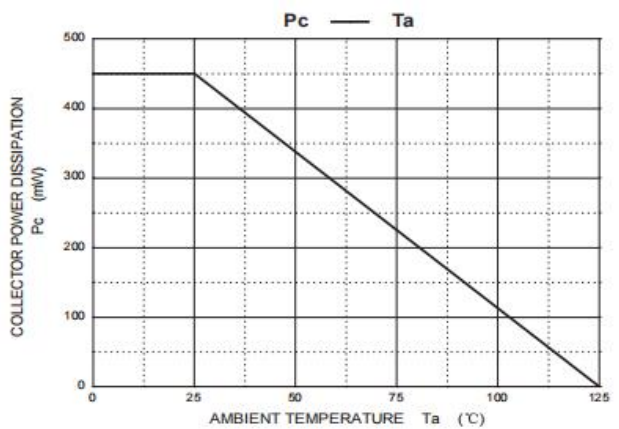
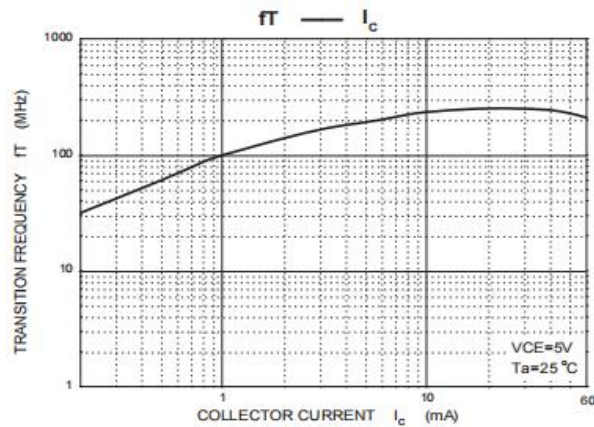
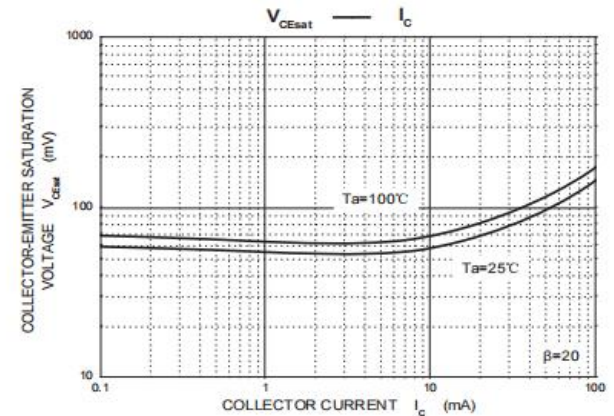
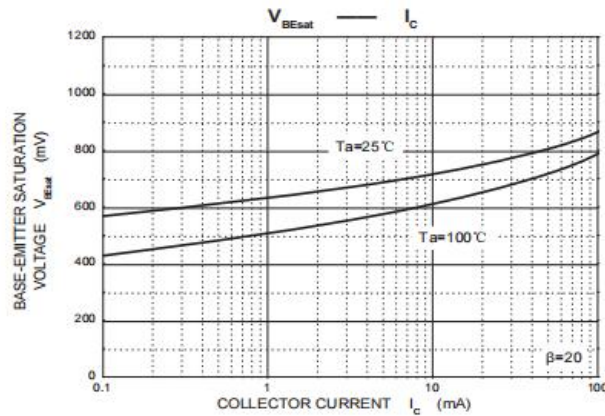
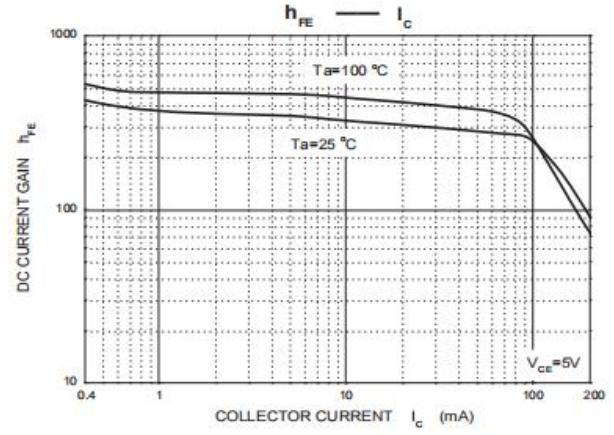
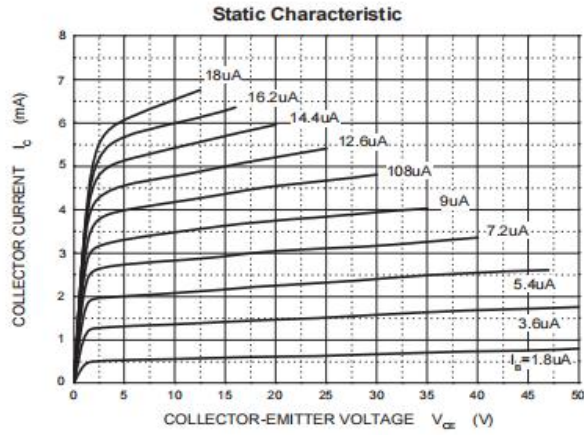
Rank 档位	A	B	C	D
H_{FE} Range	60-150	100-300	200-600	400-1000

■Electrical Characteristics 电特性

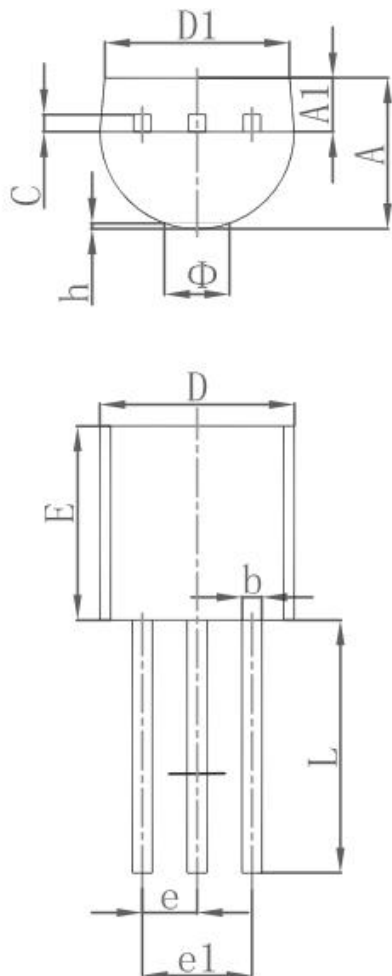
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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 (IC=100uA, IE=0)	BV _{CBO}	50	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 (IC=1mA, IB=0)	BV _{CEO}	45	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压 (IE=100uA, IC=0)	BV _{EBO}	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流 (V _{CB} =50V, IE=0)	I _{CBO}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流 (V _{EB} =5V, IC=0)	I _{EBO}	—	—	100	nA
DC Current Gain 直流电流增益 (V _{CE} =5V, IC=1mA)	H _{FE}	60	—	1000	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 (IC=100mA, IB=5mA)	V _{CE(sat)}	—	—	0.3	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 (IC=100mA, IB=5mA)	V _{BE(sat)}	—	—	1	V
Transition Frequency 特征频率 (V _{CE} =5V, IC=10mA)	f _T	150	—	—	MHz

■ 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	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015