

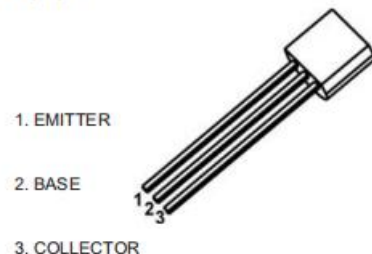
TO-92 Bipolar Transistor 双极型三极管

■ Features 特点

NPN Switching 开关

■ Absolute Maximum Ratings 最大额定值

TO-92



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}	60	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	40	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	6	V
Collector Current 集电极电流	I_C	200	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	625	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	200	$^{\circ}\text{C}/\text{W}$
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

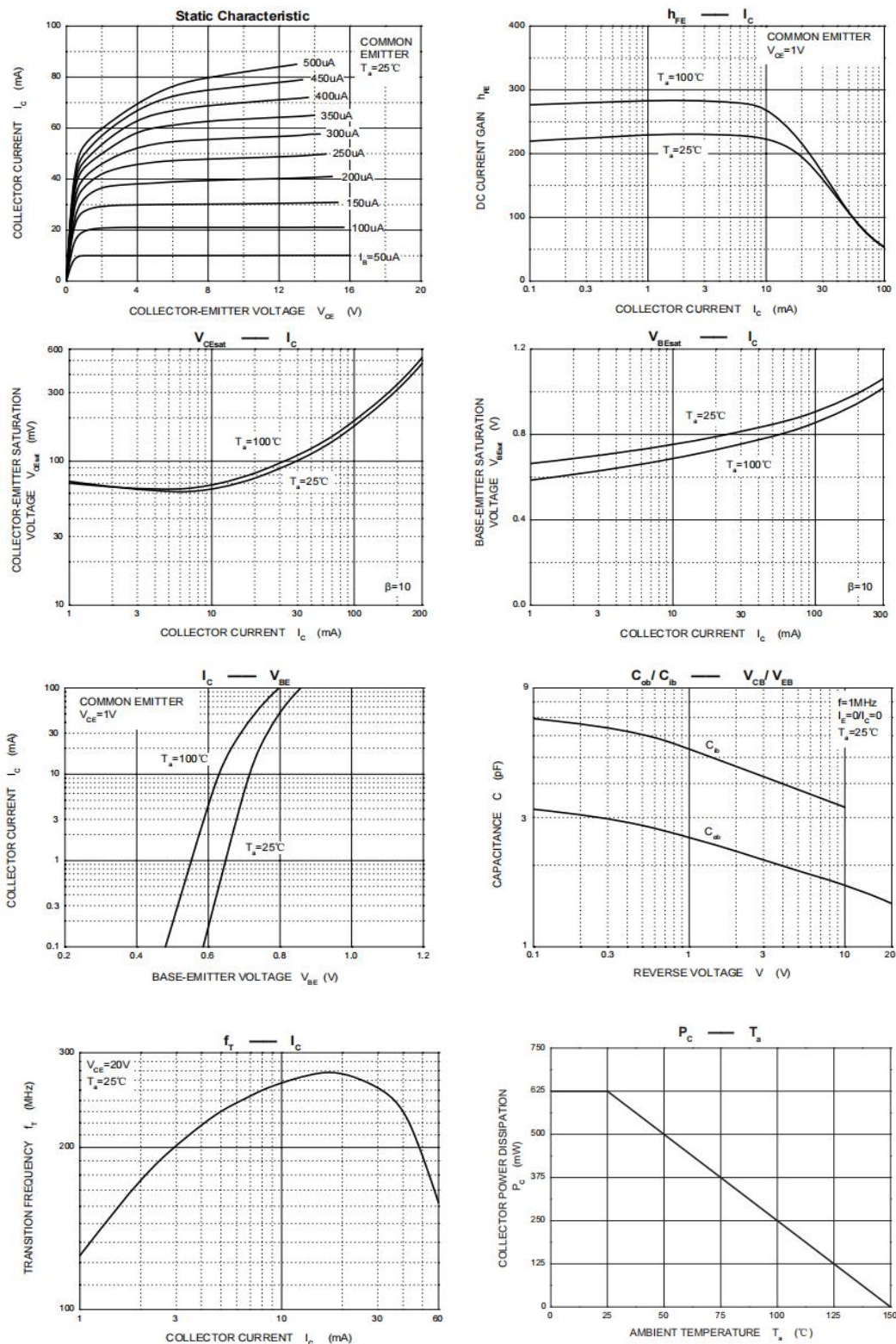
Rank 档位	O	Y	G
H_{FE} Range	100-200	200-300	300-400

■Electrical Characteristics 电特性

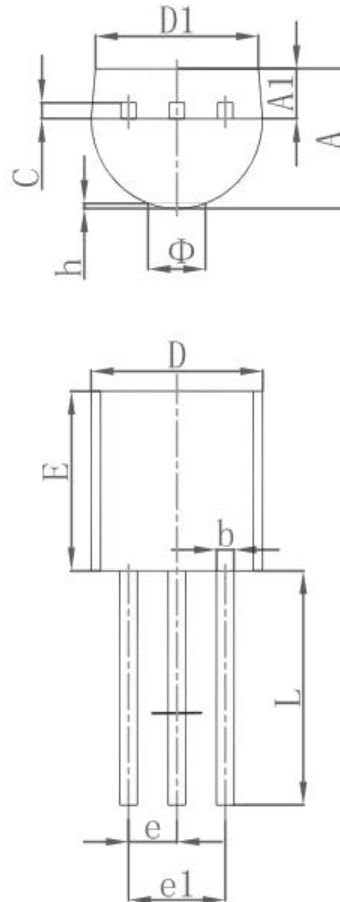
(TA=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

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(IC=10uA, IE=0)	BV _{CBO}	60	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压(IC=1mA, IB=0)	BV _{CEO}	40	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(IE=10uA, IC=0)	BV _{EBO}	6	—	—	V
Collector-Base Leakage Current 集电极基极漏电流(V _{CB} =60V, IE=0)	I _{CBO}	—	—	100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流(V _{CE} =30V, V _{BE} =-3V)	I _{CEX}	—	—	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(V _{CE} =1V, IC=10mA) 直流电流增益(V _{CE} =1V, IC=50mA) (V _{CE} =1V, IC=100mA)	H _{FE}	100 60 30	—	300	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(IC=50mA, IB=5mA)	V _{CE(sat)}	—	—	0.3	V
Base-Emitter Saturation Voltage 基极发射极饱和压降(IC=50mA, IB=5mA)	V _{BE(sat)}	—	—	0.95	V
Transition Frequency 特征频率(V _{CE} =20V, IC=10mA)	f _T	300	—	—	MHz
Delay Time 延迟时间 (V _{CC} =3V, V _{BE} =-0.5V, IC=10mA, IB1=1mA)	t _d	—	—	35	ns
Rise Time 上升时间 (V _{CC} =3V, V _{BE} =-0.5V, IC=10mA, IB1=1mA)	t _r	—	—	35	ns
Storage Time 贮存时间 (V _{CC} =3V, IC=10mA, IB1=IB2=1mA)	t _s	—	—	200	ns
Fall Time 下降时间 (V _{CC} =3V, IC=10mA, IB1=IB2=1mA)	t _f	—	—	50	ns

■ 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