



安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

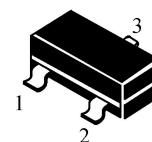
MMBT3906T

SOT-523 Bipolar Transistor 双极型三极管

■ Features 特点

PNP Switching 开关

- 1. BASE
- 2. EMITTER
- 3. COLLECTOR



■ 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}	-40	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	-5	V
Collector Current 集电极电流	I_C	-200	mA
Power dissipation 耗散功率	$P_C(T_a=25^\circ\text{C})$	150	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
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

MMBT3906T=3N

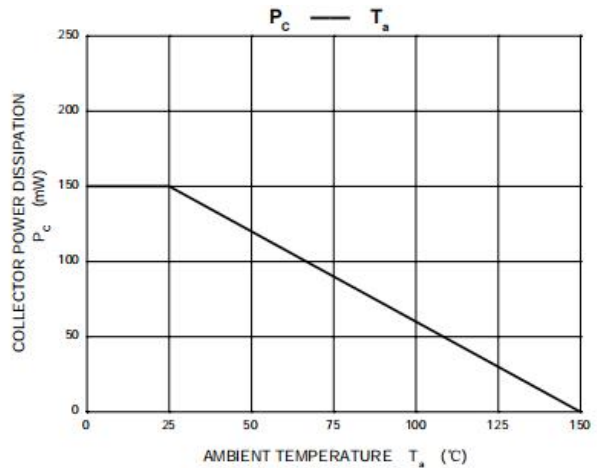
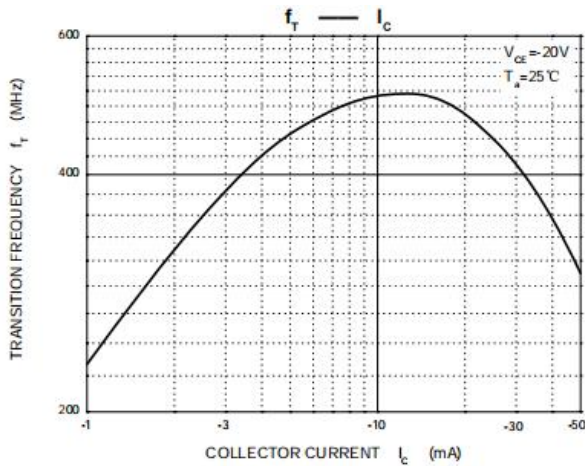
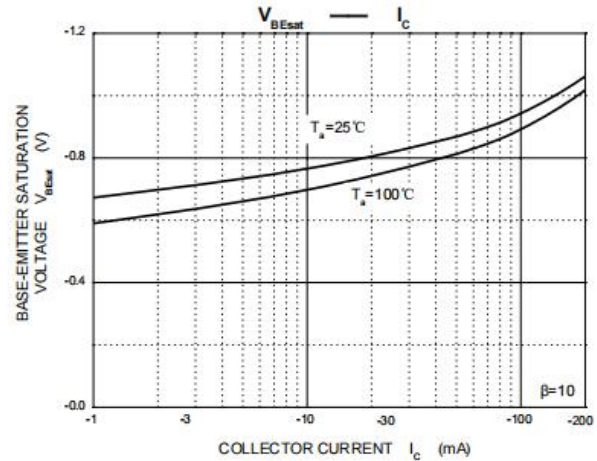
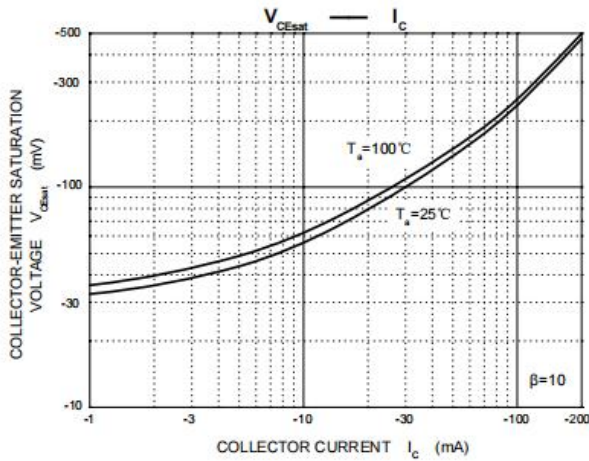
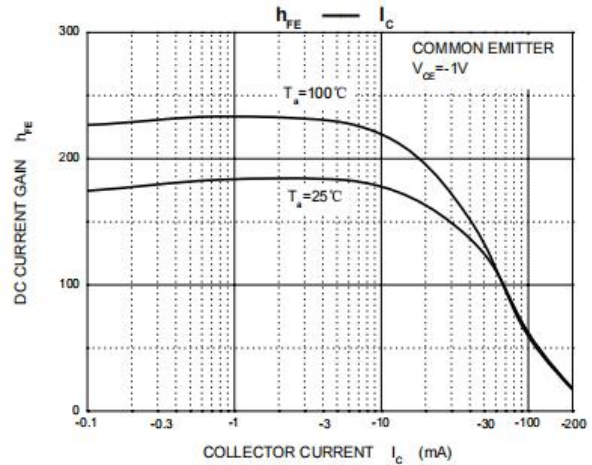
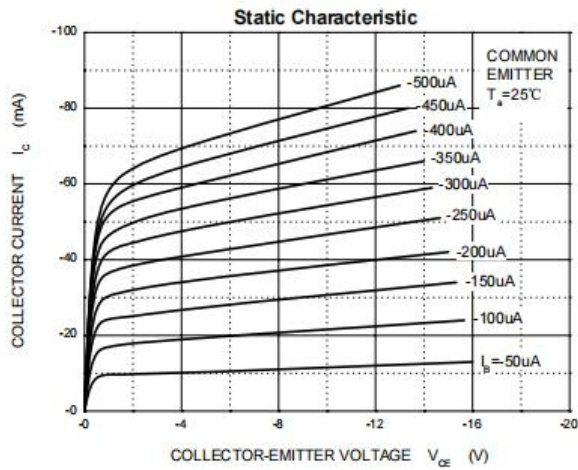


■ Electrical Characteristics 电特性

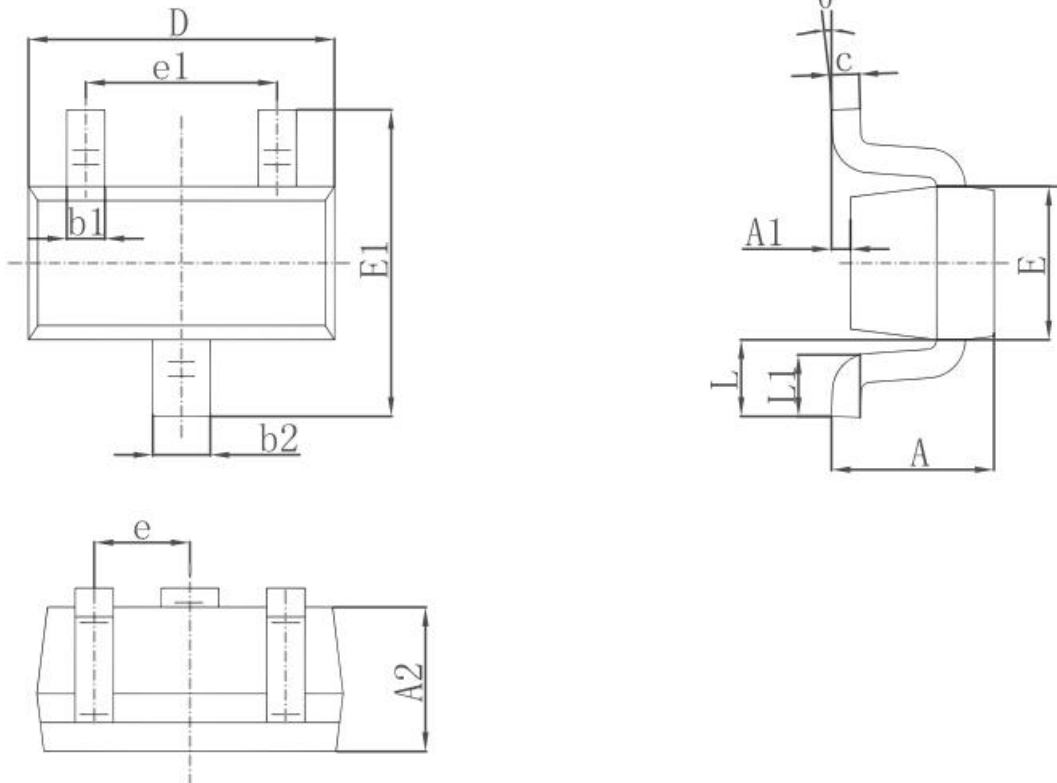
(TA=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

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(I _C =-10uA, 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}	-40	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(I _E =-10uA, 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 Leakage Current 集电极发射极漏电流(V _{CE} =-30V, V _{BE} =3V)	I _{CEX}	—	—	-50	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} =-1V, I _C =-1mA) 直流电流增益(V _{CE} =-1V, I _C =-10mA) (V _{CE} =-1V, I _C =-50mA)	H _{FE}	80 100 60	—	300	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(I _C =-50mA, I _B =-5mA)	V _{CE(sat)}	—	—	-0.4	V
Base-Emitter Saturation Voltage 基极发射极饱和压降(I _C =-50mA, I _B =-5mA)	V _{BE(sat)}	—	—	-0.95	V
Transition Frequency 特征频率(V _{CE} =-20V, I _C =-10mA)	f _T	250	—	—	MHz
Delay Time 延迟时间 (V _{CC} =-3V, V _{BE} =0.5V, I _C =-10mA, I _{B1} =-1mA)	t _d	—	—	35	ns
Rise Time 上升时间 (V _{CC} =-3V, V _{BE} =0.5V, I _C =-10mA, I _{B1} =-1mA)	t _r	—	—	35	ns
Storage Time 贮存时间 (V _{CC} =-3V, I _C =-10mA, I _{B1} =I _{B2} =-1mA)	t _s	—	—	225	ns
Fall Time 下降时间 (V _{CC} =-3V, I _C =-10mA, I _{B1} =I _{B2} =-1mA)	t _f	—	—	75	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	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
theta	0°	8°	0°	8°