



安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

MMBTA05/MMBTA06

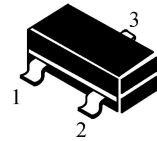
SOT-23 Bipolar Transistor 双极型三极管

SOT-23

■ Features 特点

NPN General Purpose 通用

- 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
		MMBTA05	MMBTA06	
Collector-Base Voltage 集电极基极电压	V_{CBO}	60	80	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	60	80	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	4		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	$R_{\theta JA}$	417		$^\circ\text{C}/\text{W}$
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

Type	MMBTA05	MMBTA06
Mark	1H	1GM

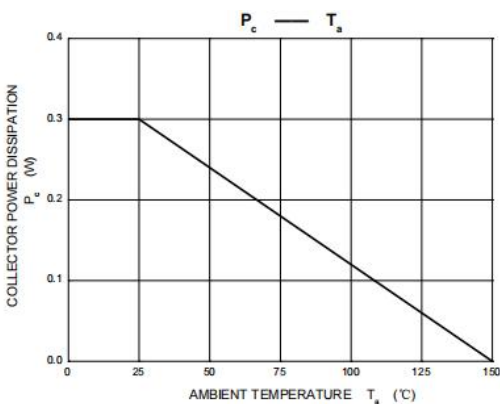
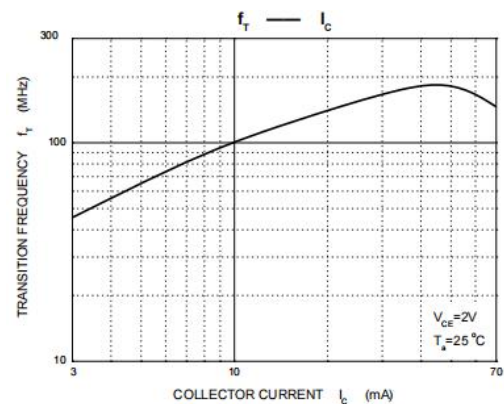
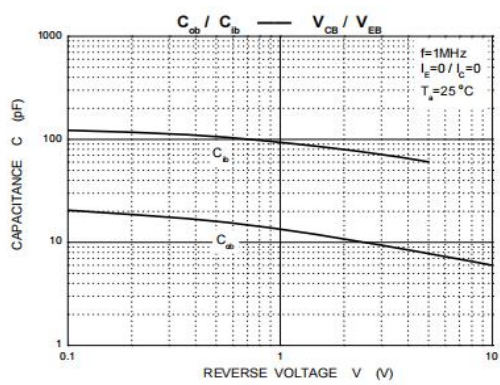
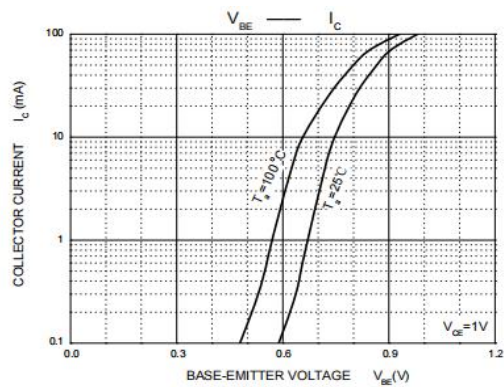
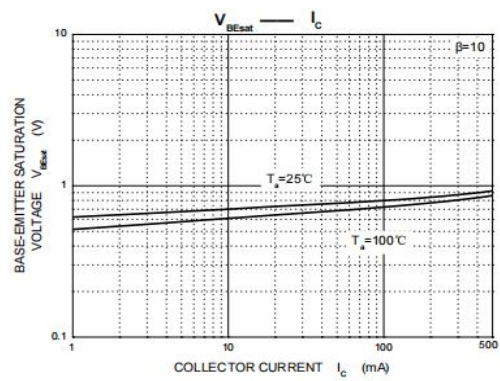
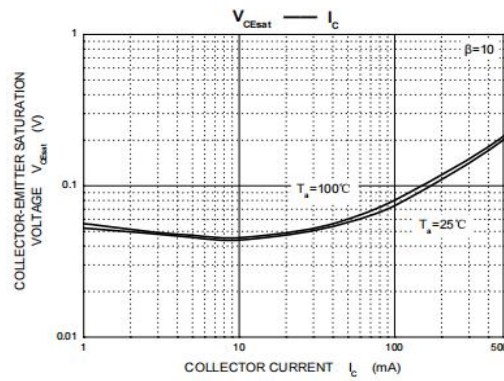
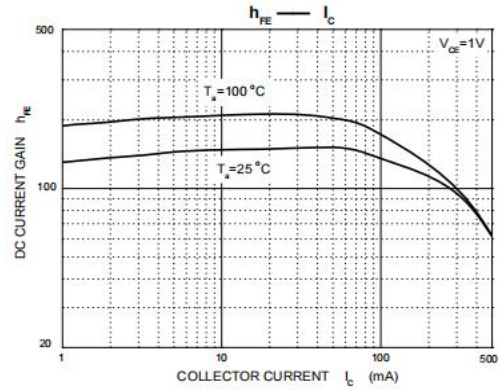
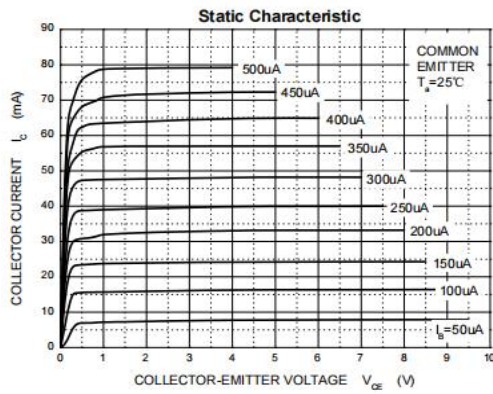


■ Electrical Characteristics 电特性

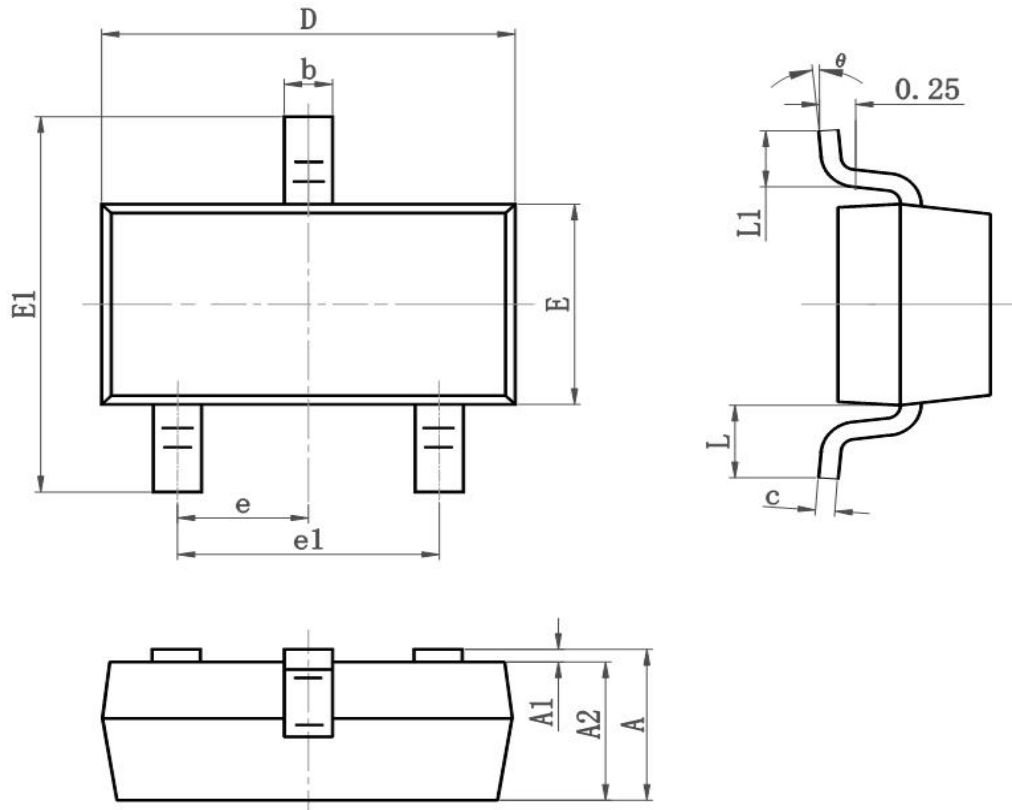
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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 ($I_C=100\mu\text{A}$, $I_E=0$)	MMBTA05 MMBTA06	BV_{CBO}	60 80	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 ($I_C=10\text{mA}$, $I_B=0$)	MMBTA05 MMBTA06	BV_{CEO}	60 80	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压 ($I_E=100\mu\text{A}$, $I_C=0$)		BV_{EBO}	4	—	—	V
Collector-Base Leakage Current 集电极基极漏电流	MMBTA05($V_{CB}=60\text{V}, I_E=0$) MMBTA06($V_{CB}=80\text{V}, I_E=0$)	I_{CBO}	—	—	100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流	MMBTA05($V_{CB}=60\text{V}, I_B=0$) MMBTA06($V_{CB}=60\text{V}, I_B=0$)	I_{CEO}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流($V_{EB}=4\text{V}$, $I_C=0$)		I_{EBO}	—	—	100	nA
DC Current Gain($V_{CE}=1\text{V}, I_C=10\text{mA}$) 直流电流增益($V_{CE}=1\text{V}, I_C=100\text{mA}$)		H_{FE}	100 100	—	400	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降($I_C=100\text{mA}$, $I_B=10\text{mA}$)		$V_{CE(sat)}$	—	—	0.25	V
Base-Emitter Saturation Voltage 基极发射极饱和压降($I_C=100\text{mA}$, $I_B=10\text{mA}$)		$V_{BE(sat)}$	—	—	1.2	V
Base-Emitter On Voltage 基极发射极导通电压($V_{CE}=1\text{V}$, $I_C=100\text{mA}$)		$V_{BE(on)}$	—	—	1.2	V
Transition Frequency 特征频率($V_{CE}=2\text{V}$, $I_C=10\text{mA}$)		f_T	100	—	—	MHz
Output Capacitance 输出电容($V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$)		C_{ob}	—	10	—	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	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°