



SOT-23 Bipolar Transistor 双极型三极管

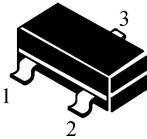
SOT-23

■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
		MMBTA05-6AF	MMBTA06-6AF	
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	$P_C(T_a=25^{\circ}C)$	300		mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	417		$^{\circ}C/W$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}C$		

■Device Marking 产品打标

Type	MMBTA05-6AF	MMBTA06-6AF
Mark	1H	1GM

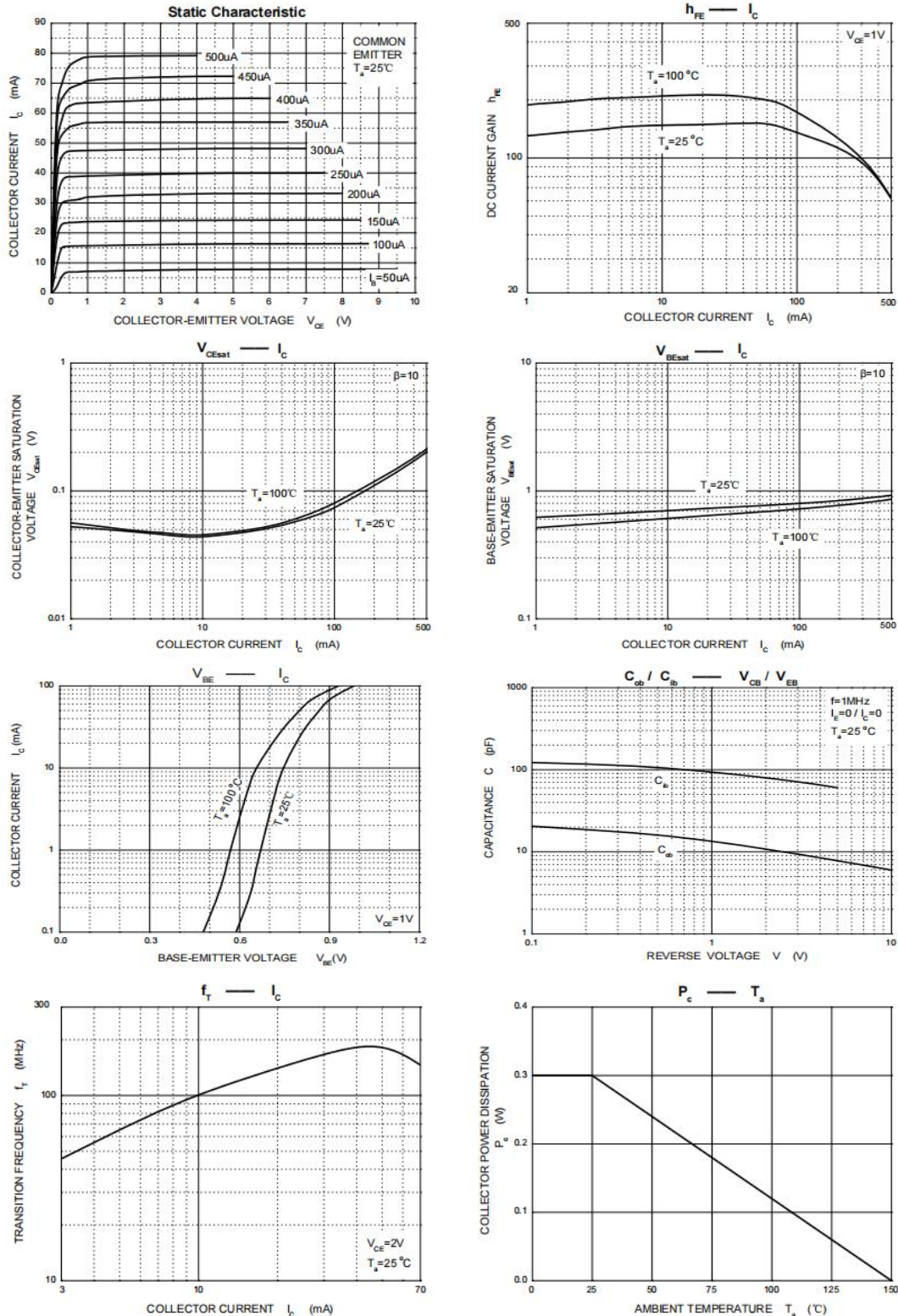


■Electrical Characteristics 电特性

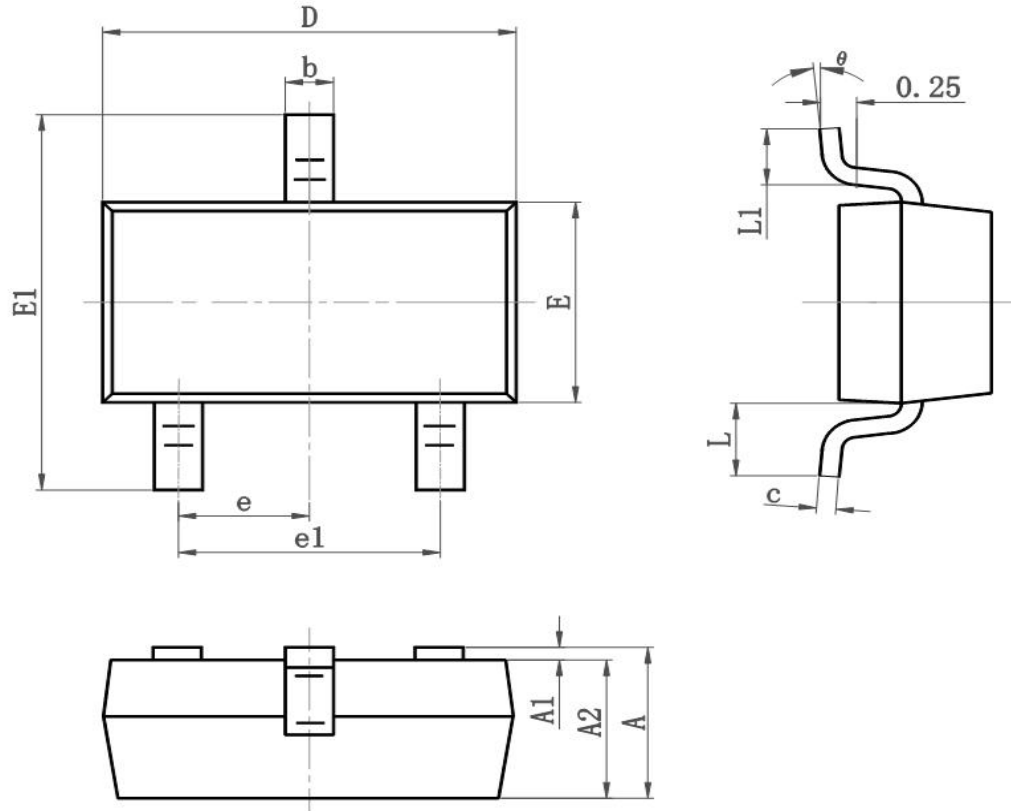
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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= 100μA, IE=0)	MMBTA05 MMBTA06	BV _{CBO}	60 80	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 (IC= 10mA, IB=0)	MMBTA05 MMBTA06	BV _{CEO}	60 80	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压 (IE= 100μA, IC=0)		BV _{EBO}	4	—	—	V
Collector-Base Leakage Current 集电极基极漏电流	MMBTA05(V _{CB} =60V,IE=0) MMBTA06(V _{CB} =80V,IE=0)	I _{CBO}	—	—	100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流	MMBTA05(V _{CB} =60V,IB=0) MMBTA06(V _{CB} =60V,IB=0)	I _{CEO}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流(V _{EB} =4V, IC=0)		I _{EBO}	—	—	100	nA
DC Current Gain(V _{CE} = 1V,IC= 10mA) 直流电流增益(V _{CE} = 1V,IC= 100mA)		H _{FE}	100 100	—	400	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(IC= 100mA, IB= 10mA)		V _{CE(sat)}	—	—	0.25	V
Base-Emitter Saturation Voltage 基极发射极饱和压降(IC= 100mA, IB= 10mA)		V _{BE(sat)}	—	—	1.2	V
Base-Emitter On Voltage 基极发射极导通电压(V _{CE} = 1V, IC= 100mA)		V _{BE(on)}	—	—	1.2	V
Transition Frequency 特征频率(V _{CE} = 2V, IC= 10mA)		f _T	100	—	—	MHz
Output Capacitance 输出电容(V _{CB} = 10V, IE=0, f=1MHz)		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	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.500	0.600	0.020	0.024
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°