

SOT-23 Bipolar Transistor 双极型三极管

■ Features 特点

PNP Low equivalent on-resistance 低等效电阻



■ 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}	-120	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	-100	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	-5	V
Collector Current 集电极电流	I_C	-1000	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	250	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
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

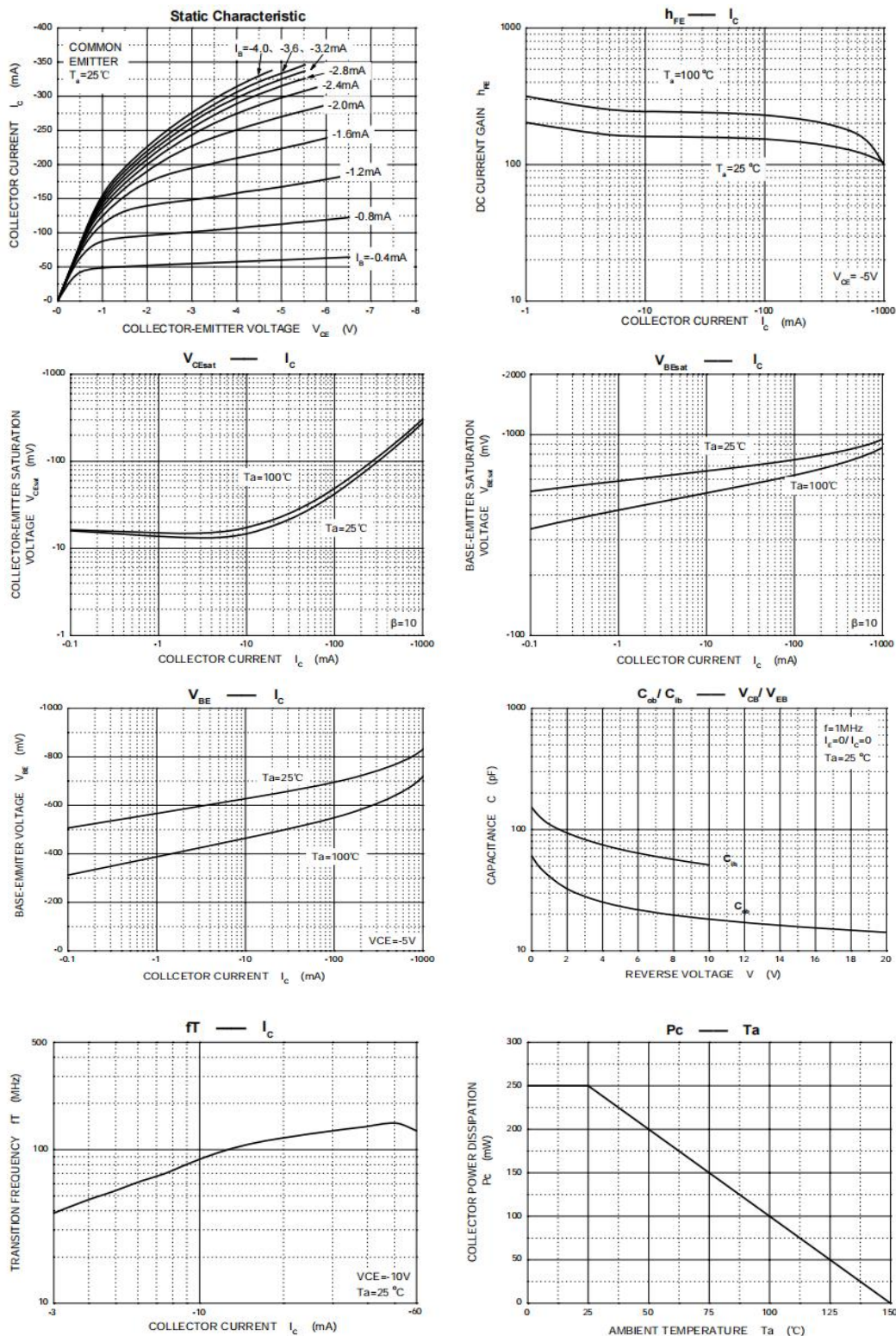
FMMT593=593

■Electrical Characteristics 电特性

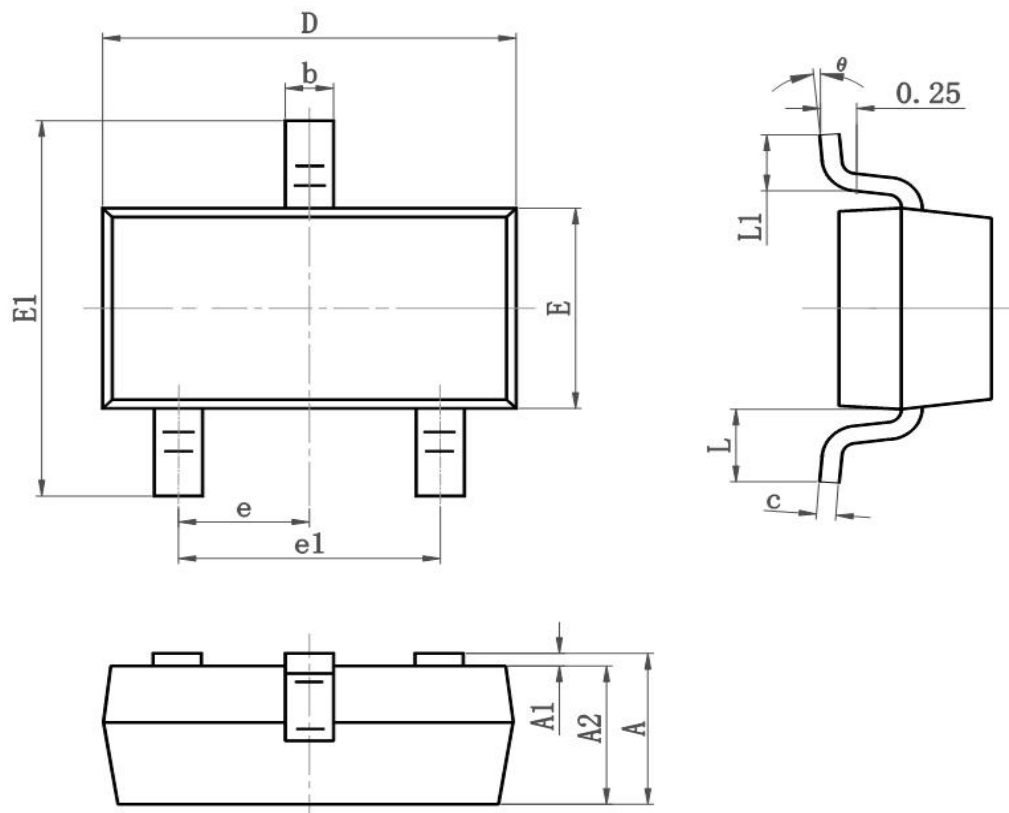
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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($I_C = -100\mu A$, $I_E = 0$)	BV_{CBO}	-120	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压($I_C = -10mA$, $I_B = 0$)	BV_{CEO}	-100	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压($I_E = -100\mu A$, $I_C = 0$)	BV_{EBO}	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流($V_{CB} = -100V$, $I_E = 0$)	I_{CBO}	—	—	-100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流($V_{CE} = -100V$, $V_{BE} = 0V$)	I_{CES}	—	—	-100	nA
Emitter-Base Leakage Current 发射极基极漏电流($V_{EB} = -4V$, $I_C = 0$)	I_{EBO}	—	—	-100	nA
DC Current Gain($V_{CE} = -5V$, $I_C = -1mA$) 直流电流增益($V_{CE} = -5V$, $I_C = -250mA$) ($V_{CE} = -5V$, $I_C = -500mA$) ($V_{CE} = -5V$, $I_C = -1000mA$)	H_{FE}	100 100 100 50	—	300	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 ($I_C = -250mA$, $I_B = -25mA$) ($I_C = -500mA$, $I_B = -50mA$)	$V_{CE(sat)}$	—	—	-0.2 -0.3	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 ($I_C = -500mA$, $I_B = -50mA$)	$V_{BE(sat)}$	—	—	-1.1	V
Base-Emitter On Voltage 基极发射极导通电压 ($V_{CE} = -5V$, $I_C = -1000mA$)	$V_{BE(on)}$	—	—	-1	V
Transition Frequency 特征频率($V_{CE} = -10V$, $I_C = -50mA$)	f_T	50	—	—	MHz
Output Capacitance 输出电容($V_{CB} = -10V$, $I_E = 0$, $f = 1MHz$)	C_{ob}	—	5	—	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°