



安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

MMBT5401S

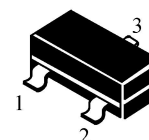
SOT-23 Bipolar Transistor 双极型三极管

■ Features 特点

PNP High Voltage 高压

SOT-23

- 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}	-160	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	-150	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	-5	V
Collector Current 集电极电流	I_C	-600	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

$H_{FE}(2)$	100-200	200-300
Marking	2L.	

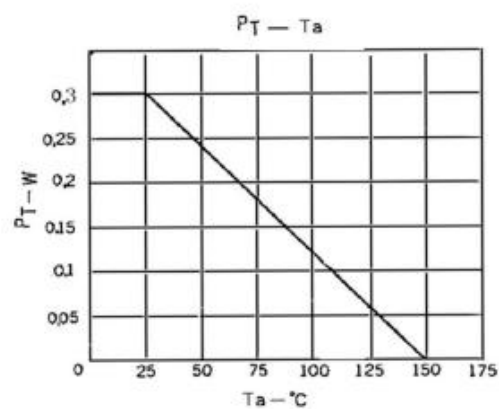
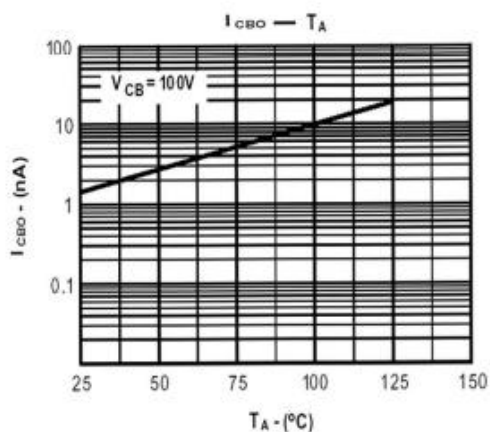
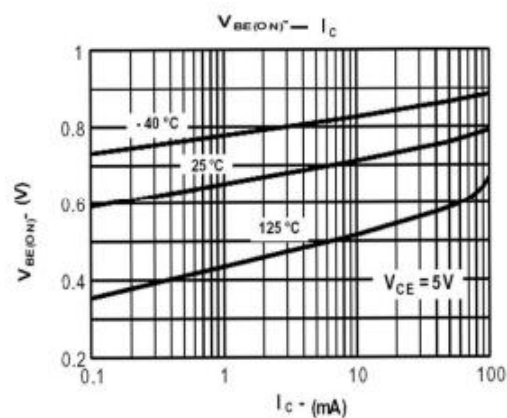
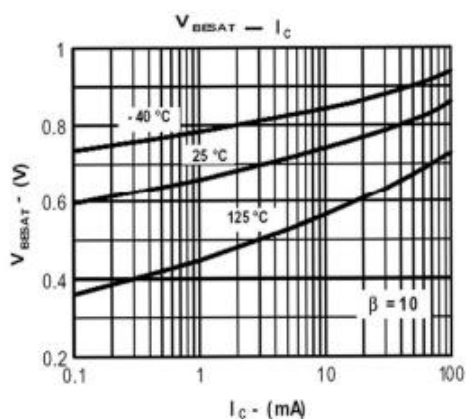
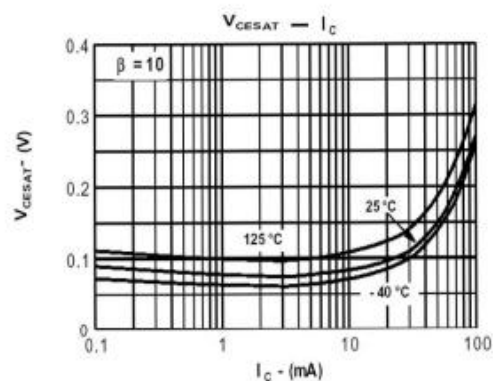
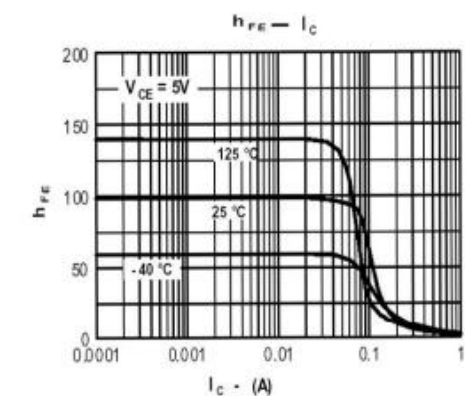


■Electrical Characteristics 电特性

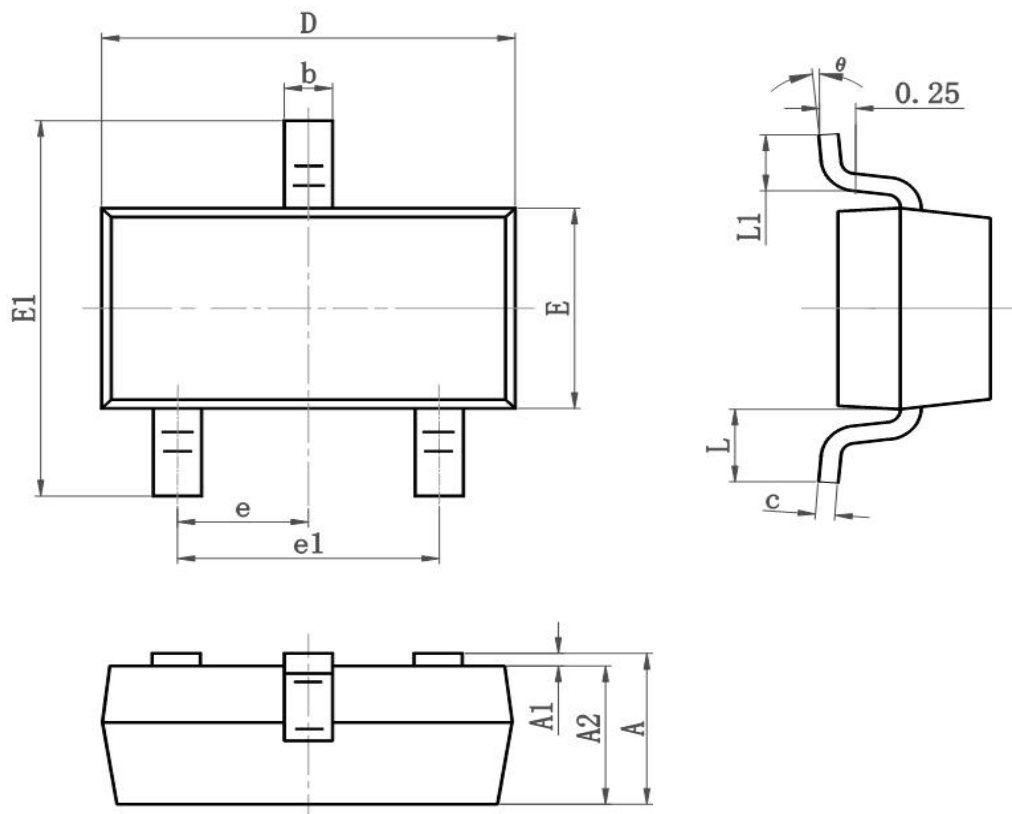
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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($I_C = -100\mu\text{A}$, $I_E = 0$)	BV_{CBO}	-160	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压($I_C = -1\text{mA}$, $I_B = 0$)	BV_{CEO}	-150	—	—	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}	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流($V_{CB} = -160\text{V}$, $I_E = 0$)	I_{CBO}	—	—	-100	nA
Collector-Emitter Punch Throng Current 集电极发射极穿透电流($V_{CE} = -120\text{V}$, $I_B = 0$)	I_{CES}	—	—	-100	nA
Emitter-Base Leakage Current 发射极基极漏电流($V_{EB} = -5\text{V}$, $I_C = 0$)	I_{EBO}	—	—	-100	nA
DC Current Gain 直流电流增益($V_{CE} = -5\text{V}$, $I_C = -1\text{mA}$)	$H_{FE(1)}$	80	—	—	
DC Current Gain 直流电流增益($V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$)	$H_{FE(2)}$	100	—	300	
Divid 直流电流增益变化($H_{FE(1)}/H_{FE(2)}$)	R	0.8	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降($I_C = -50\text{mA}$, $I_B = -5\text{mA}$)	$V_{CE(sat)}$	—	—	-0.5	V
Base-Emitter Saturation Voltage 基极发射极饱和压降($I_C = -50\text{mA}$, $I_B = -5\text{mA}$)	$V_{BE(sat)}$	—	—	-1	V
Base-Emitter On Voltage 基极发射极开通电压($I_C = -50\text{mA}$, $I_B = -5\text{mA}$)	$V_{BE(on)}$	—	—	-1	V
Transition Frequency 特征频率($V_{CE} = -10\text{V}$, $I_C = -10\text{mA}$)	fT	100	—	—	MHz
Output Capacitance 输出电容($V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$)	Cob	—	6	—	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°