



# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

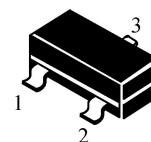
MMBT5401W

## SOT-323 Bipolar Transistor 双极型三极管

### ■ Features 特点

PNP High Voltage 高压

- 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	$I_C$	-300	mA
Peak Collector Current 峰值集电极电流	$I_{CM}$	-600	mA
Power dissipation 耗散功率	$P_C(T_a=25^\circ\text{C})$	200	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
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

Marking	K4M
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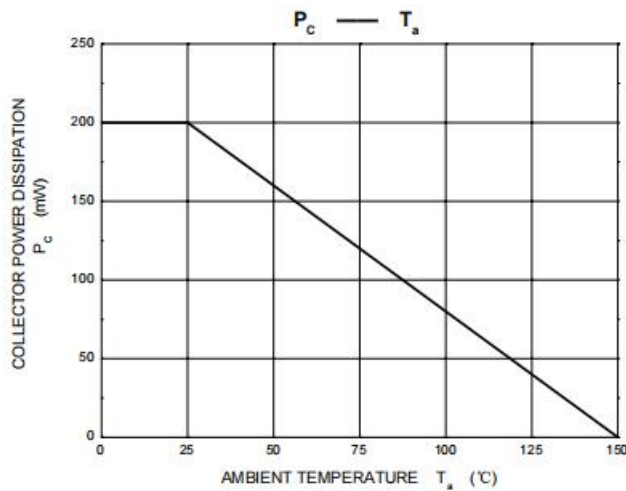
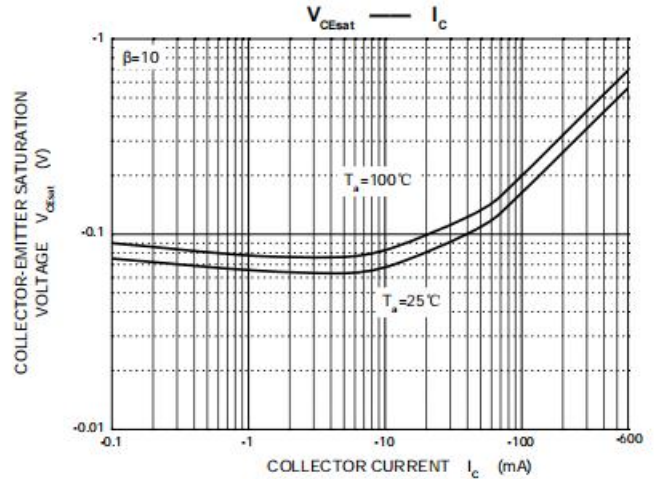
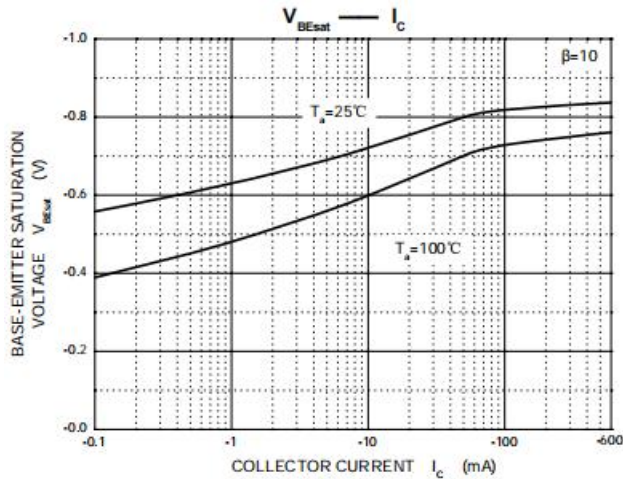
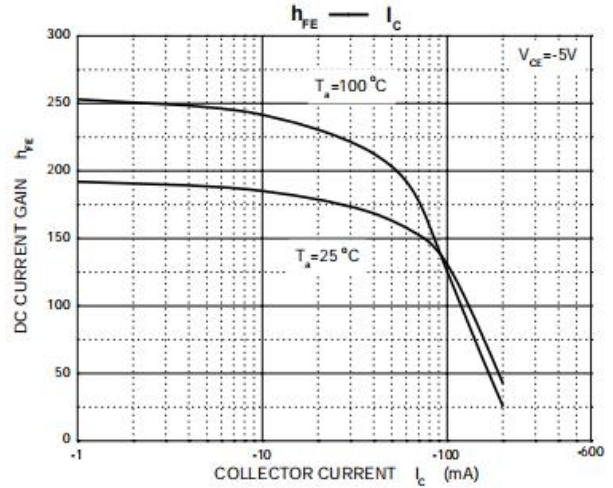
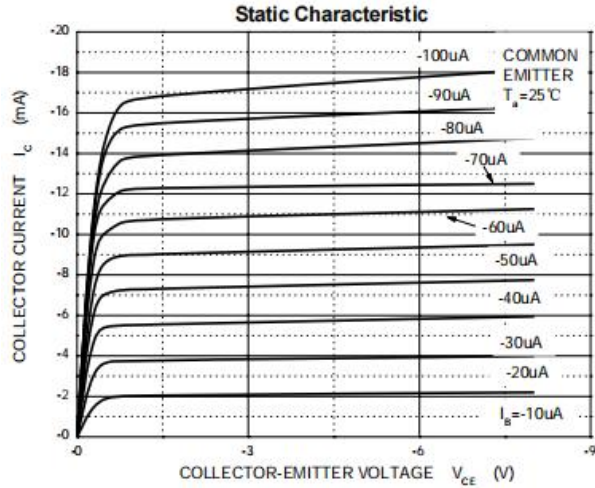


## ■ Electrical Characteristics 电特性

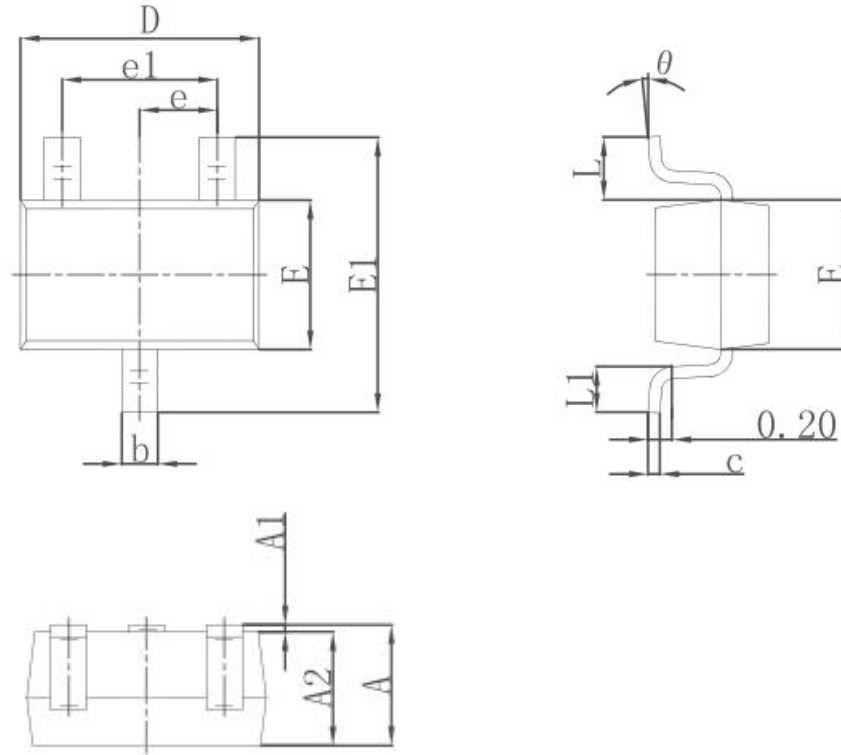
(TA=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

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 <sub>C</sub> = -100μA, I <sub>E</sub> =0)	BV <sub>CBO</sub>	-160	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压(I <sub>C</sub> = -1mA, I <sub>B</sub> =0)	BV <sub>CEO</sub>	-150	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(I <sub>E</sub> = -10μA, I <sub>C</sub> =0)	BV <sub>EBO</sub>	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流(V <sub>CB</sub> = -160V, I <sub>E</sub> =0)	I <sub>CBO</sub>	—	—	-100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流(V <sub>CE</sub> = -120V, I <sub>B</sub> =0)	I <sub>CEO</sub>	—	—	-100	nA
Emitter-Base Leakage Current 发射极基极漏电流(V <sub>EB</sub> = -5V, I <sub>C</sub> =0)	I <sub>EBO</sub>	—	—	-100	nA
DC Current Gain 直流电流增益(V <sub>CE</sub> = -5V, I <sub>C</sub> = -1mA)	H <sub>FE</sub> (1)	80	—	—	
DC Current Gain 直流电流增益(V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA)	H <sub>FE</sub> (2)	100	—	300	
DC Current Gain 直流电流增益(V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA)	H <sub>FE</sub> (3)	50	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(I <sub>C</sub> = -10mA, I <sub>B</sub> = -1mA) (I <sub>C</sub> = -50mA, I <sub>B</sub> = -5mA)	V <sub>CE(sat)</sub>	—	—	-0.2 -0.5	V
Base-Emitter Saturation Voltage 基极发射极饱和压降(I <sub>C</sub> = -10mA, I <sub>B</sub> = -1mA) (I <sub>C</sub> = -50mA, I <sub>B</sub> = -5mA)	V <sub>BE(sat)</sub>	—	—	-1 -1	V
Transition Frequency 特征频率(V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA)	f <sub>T</sub>	100	—	—	MHz
Output Capacitance 输出电容(V <sub>CB</sub> = -5V, I <sub>E</sub> =0, f=1MHz)	C <sub>ob</sub>	—	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	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°