安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO. , LTD.

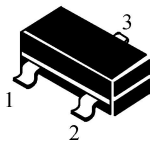
MMBT5551W

SOT-323 Bipolar Transistor 双极型三极管

■Features 特点

NPN 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}	180	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	160	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	6	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	$P_C(T_a=25℃)$	200	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\Theta JA}$	625	℃/W
Junction and Storage Temperature 结温和储藏温度	T_J,T_{stg}	-55to+150℃	

■Device Marking 产品打标

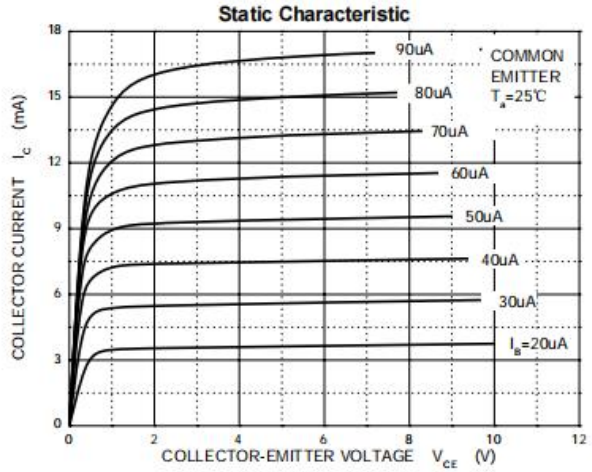
Marking	K4N

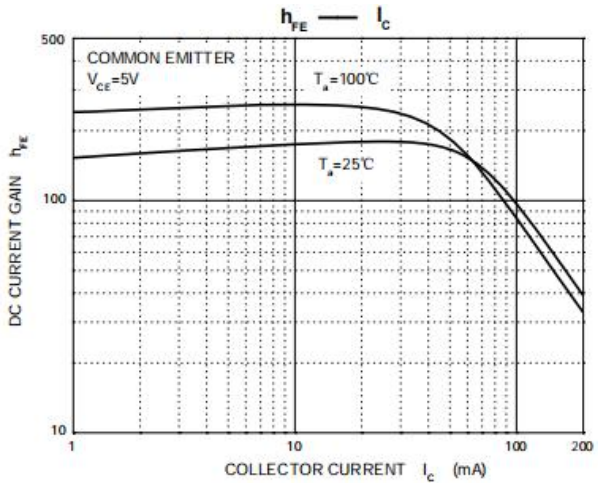
■Electrical Characteristics 电特性

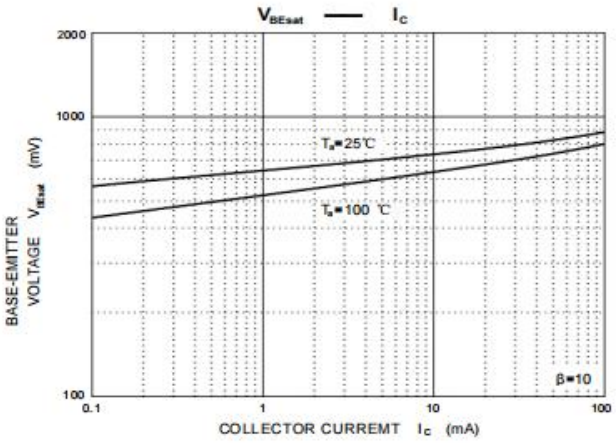
(T_A=25℃ unless otherwise noted 如无特殊说明，温度为 25℃)

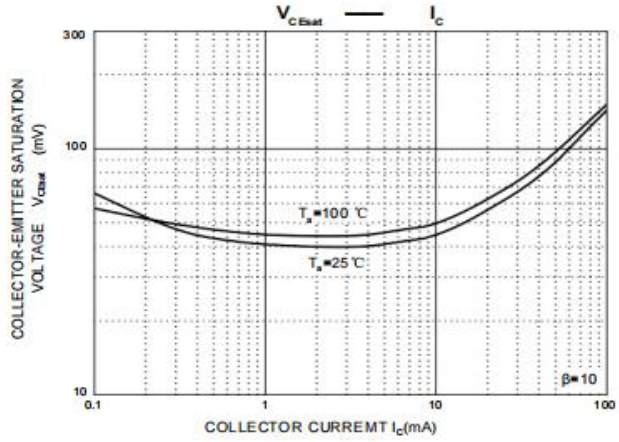
Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压(I_C=100uA，I_E=0)	BV_{CBO}	180	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压(I_C=1mA，I_B=0)	BV_{CEO}	160	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(I_E=10uA，I_C=0)	BV_{EBO}	6	—	—	V
Collector-Base Leakage Current 集电极基极漏电流(V_{CB}=180V，I_E=0)	I_{CBO}	—	—	100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流(V_{CE}=120V，I_B=0)	I_{CEO}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流(V_{EB}=6V，I_C=0)	I_{EBO}	—	—	100	nA
DC Current Gain 直流电流增益(V_{CE}=5V，I_C=1mA)	H_{FE}(1)	80	—	—	
DC Current Gain 直流电流增益(V_{CE}=5V，I_C=10mA)	H_{FE}(2)	100	—	300	
DC Current Gain 直流电流增益(V_{CE}=5V，I_C=100mA)	H_{FE}(3)	30	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(I_C=10mA，I_B=1mA) (I_C=50mA，I_B=5mA)	$V_{CE(sat)}$	—	—	0.15 0.2	V
Base-Emitter Saturation Voltage 基极发射极饱和压降(I_C=10mA，I_B=1mA) (I_C=50mA，I_B=5mA)	$V_{BE(sat)}$	—	—	1 1	V
Transition Frequency 特征频率(V_{CE}=10V，I_C=10mA)	f_T	100	—	300	MHz
Output Capacitance 输出电容(V_{CB}=10V，I_E=0, f=1MHz)	C_{ob}	—	6	—	pF

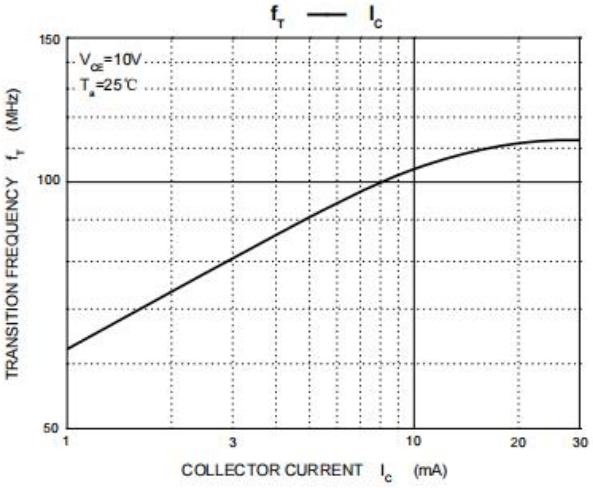
■Typical Characteristic Curve 典型特性曲线

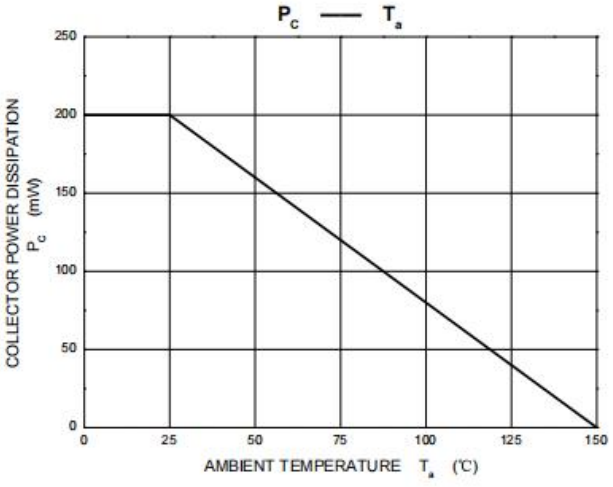




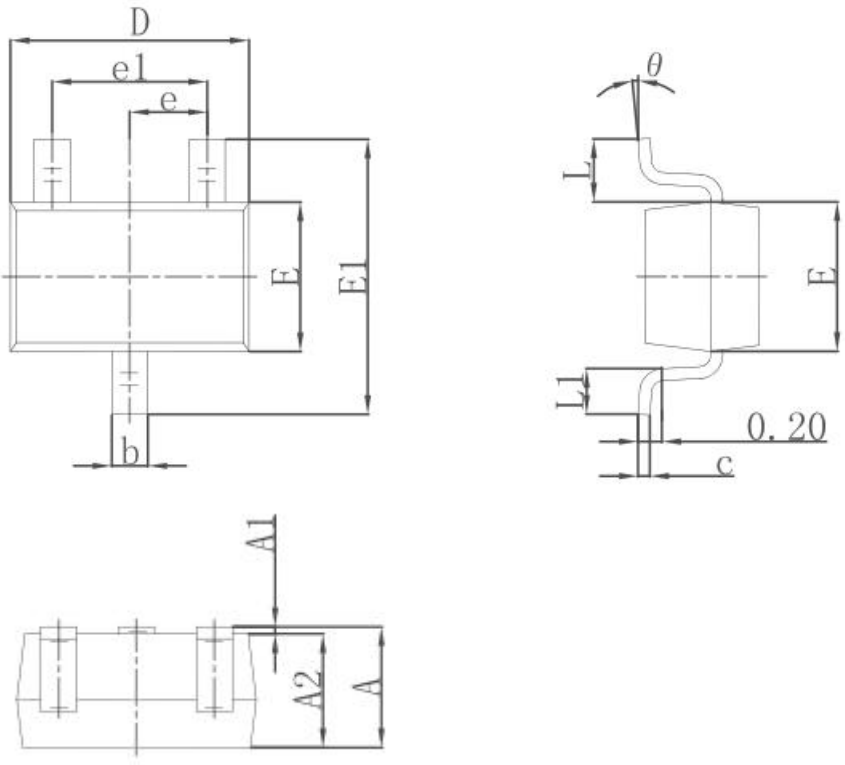








■**Dimension** 外形封装尺寸



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°