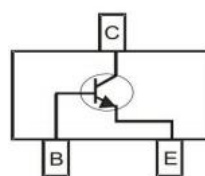


SOT-23 Bipolar Transistor 双极型三极管

■ Features 特点

NPN General Purpose 通用



■ 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}	50	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	45	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	5	V
Collector Current 集电极电流	I_C	100	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

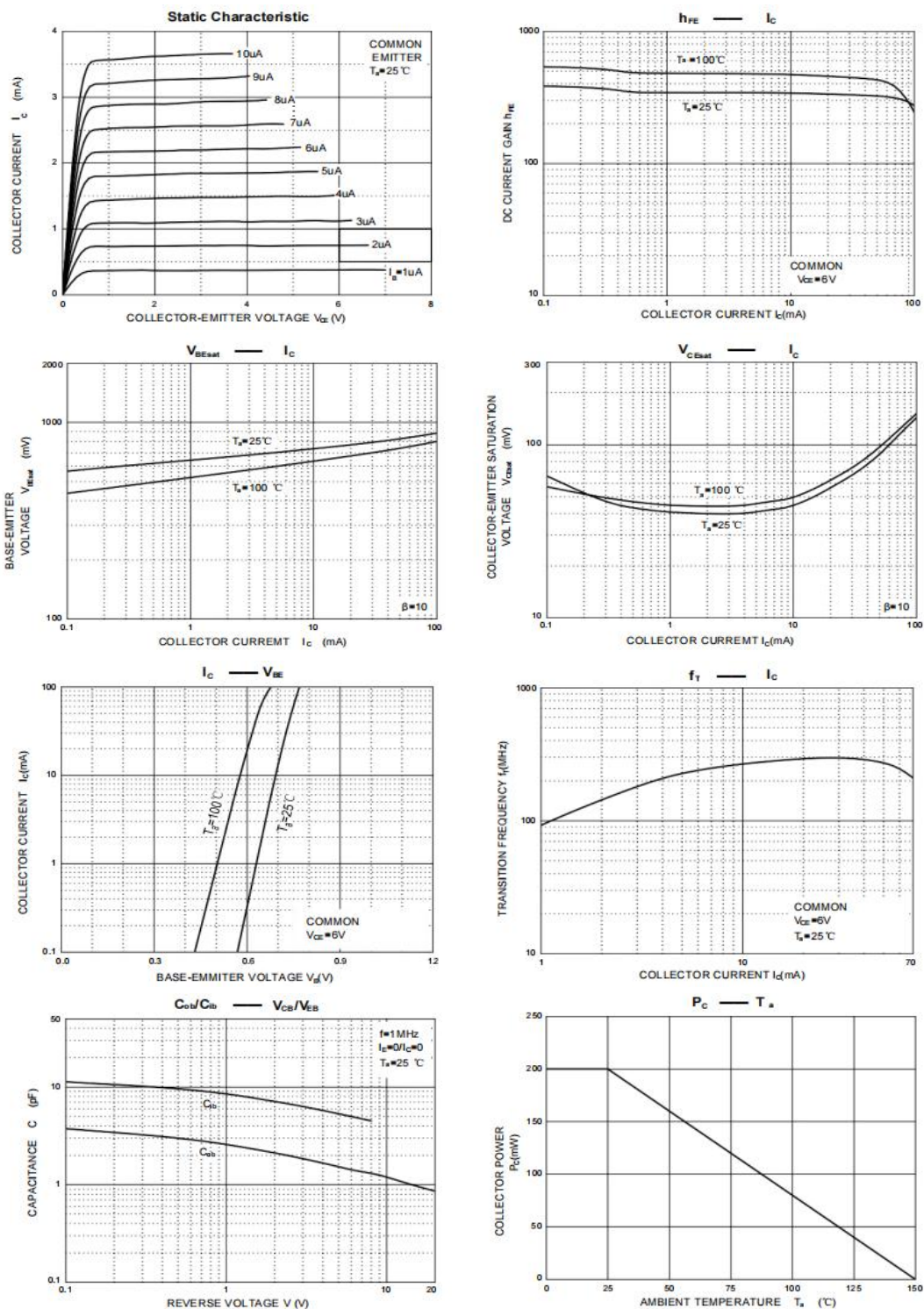
Type	BCW71	BCW72
$H_{FE}(2)$	110-220	200-450
Marking	K1	K2

■Electrical Characteristics 电特性

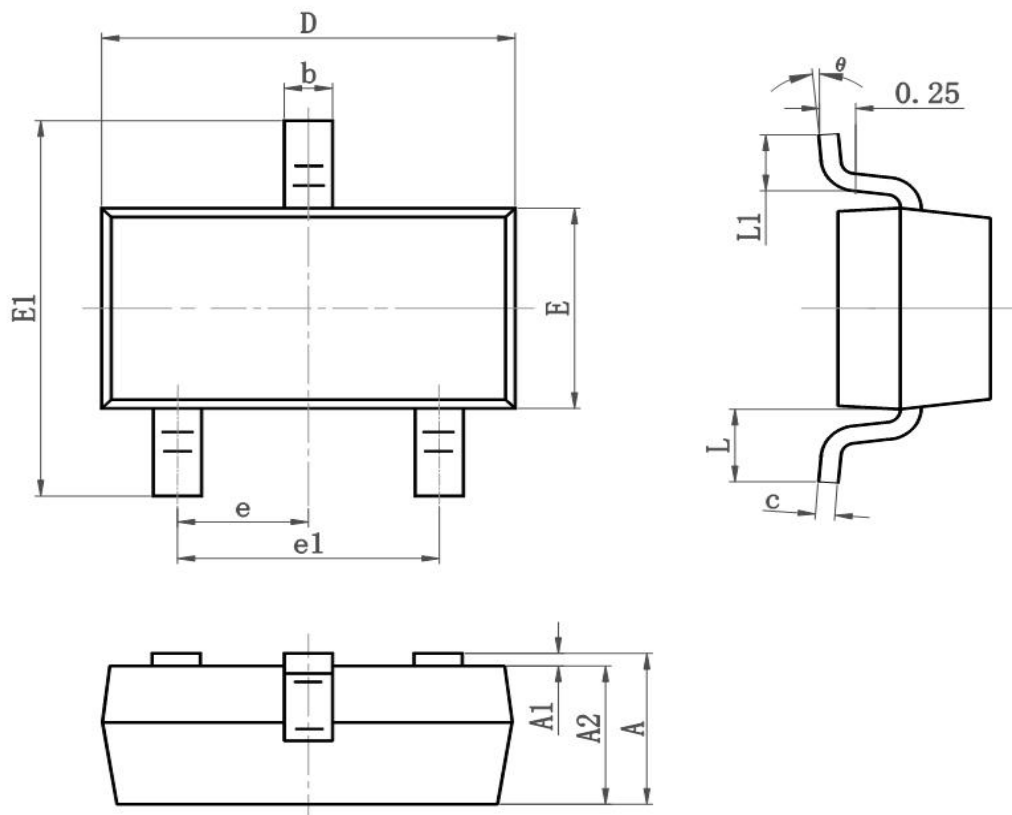
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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 =100μA, I _E =0)	BV _{CBO}	50	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压(I _C =1mA, I _B =0)	BV _{CEO}	45	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(I _E =100μA, I _C =0)	BV _{EBO}	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流(V _{CB} =40V, I _E =0)	I _{CBO}	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流(V _{EB} =5V, I _C =0)	I _{EBO}	—	—	100	nA
DC Current Gain 直流电流增益 (BCW71) (V _{CE} =5V, I _C =10μA)	H _{FE} (1)	—	90 150	—	
DC Current Gain 直流电流增益 (BCW71) (V _{CE} =5V, I _C =2mA)	H _{FE} (2)	110 200	—	220 450	
Collector-Emitter Saturation Voltage(I _C =10mA, I _B =0.5mA) 集电极发射极饱和压降(I _C =50mA, I _B =2.5mA)	V _{CE(sat)}	—	0.12 0.21	0.25	V
Base-Emitter Saturation Voltage(I _C =10mA, I _B =0.5mA) 基极发射极饱和压降(I _C =50mA, I _B =2.5mA)	V _{BE(sat)}	—	0.75 0.85	—	V
Base-Emitter On Voltage 基极发射极导通电压(V _{CE} =5V, I _C =2mA)	V _{BE(sat)}	0.55	—	0.7	V
Transition Frequency 特征频率 (V _{CE} =5V, I _C =10mA)	f _T	100	—	—	MHz
Noise Figure 噪声系数 (V _{CE} =5V, I _C =200μA, f=1KHz)	NF	—	—	10	dB
Output Capacitance 输出电容 (V _{CB} =10V, I _E =0, f=1MHz)	C _{ob}	—	2.5	—	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°