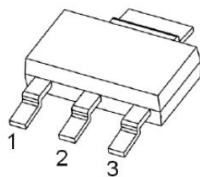


SOT-223 Bipolar Transistor 双极型三极管

■ Features 特点

PNP General Purpose 通用



1. BASE

2. COLLECTOR

3. EMITTER



■ Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	BCP51/ -10/-16	BCP52/ -10/-16	BCP53/ -10/-16	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	-45	-60	-100	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	-45	-60	-80	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	$P_C(T_a=25^{\circ}C)$	1500			mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	94			$^{\circ}C/W$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}C$			

■ Device Rank 产品分档

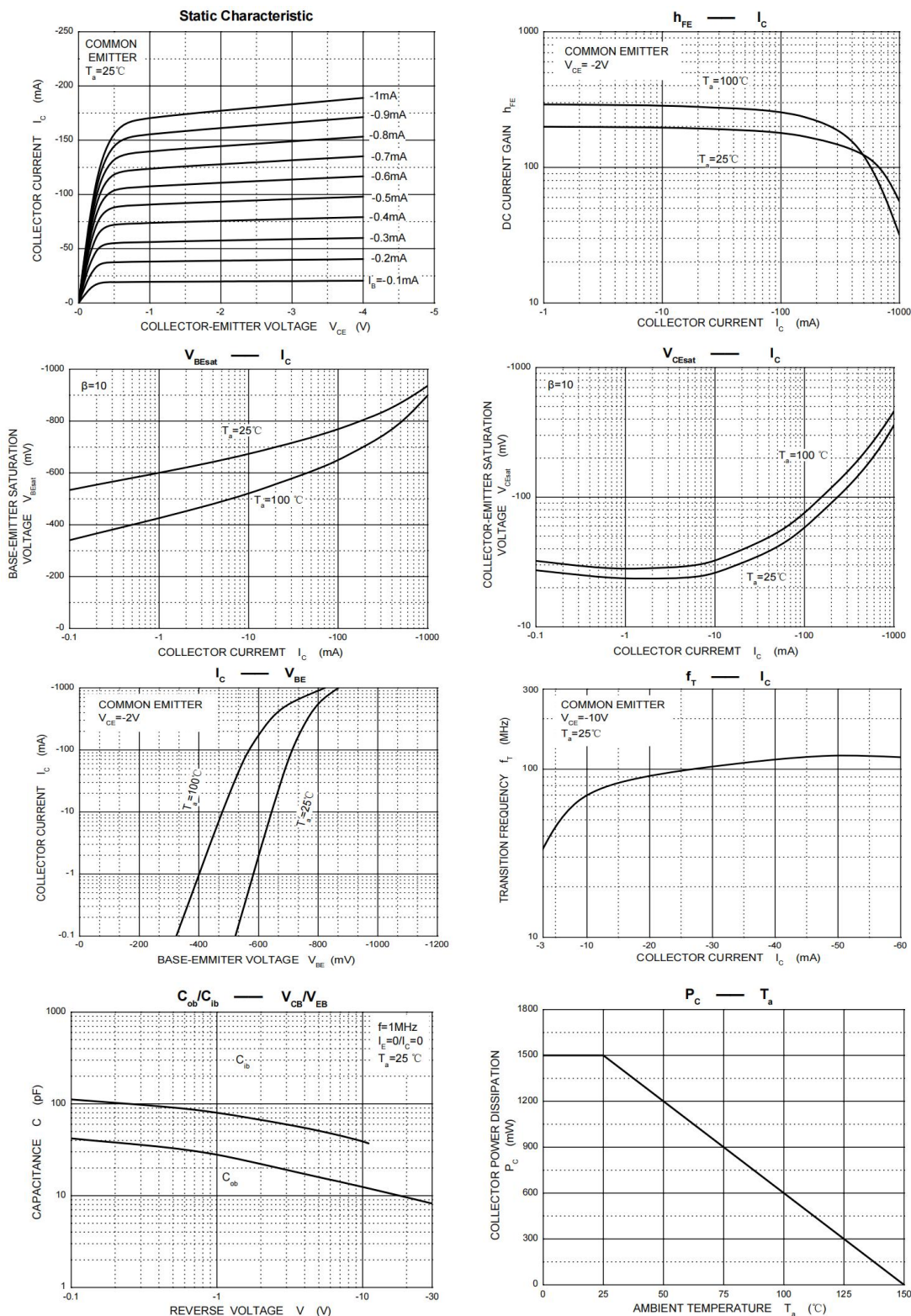
$H_{FE}(2)$ Range	63-160(-10)	100-250(-16)
BCP51	BCP51-10	BCP51-16
BCP52	BCP52-10	BCP52-16
BCP53	BCP53-10	BCP53-16

■Electrical Characteristics 电特性

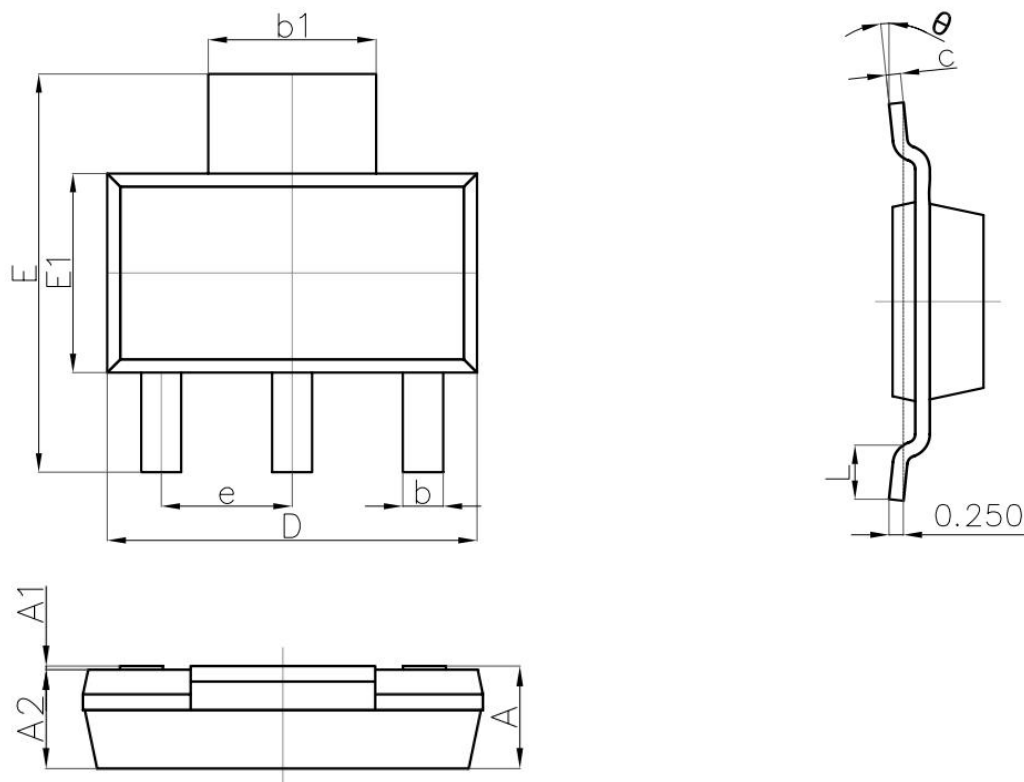
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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 (IC= -100uA, IE=0)	BCP51/-10/-16 BCP52/-10/-16 BCP53/-10/-16	BV _{CBO}	-45 -60 -100	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 (IC= -10mA, IB=0)	BCP51/-10/-16 BCP52/-10/-16 BCP53/-10/-16	BV _{CEO}	-45 -60 -80	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(IE= -100uA, IC=0)		BV _{EBO}	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流	BCP51/-10/-16 (V _{CB} = -30V,IE=0) BCP52/-10/-16 (V _{CB} = -50V,IE=0) BCP53/-10/-16 (V _{CB} = -80V,IE=0)	I _{CBO}	—	—	-100	nA
Emitter-Base Leakage Current 发射极基极漏电流(V _{EB} = -4V, IC=0)		I _{EBO}	—	—	-100	nA
DC Current Gain 直流电流增益(V _{CE} = -2V,IC= -5mA)		H _{FE} (1)	25	—	—	
DC Current Gain 直流电流增益 (V _{CE} =-2V,IC=-0.15A)	BCP51/BCP52/BCP53-10 BCP51/BCP52/BCP53-16	H _{FE} (2)	63 100	—	160 250	
DC Current Gain 直流电流增益(V _{CE} = -2V,IC= -0.5A)		H _{FE} (3)	25	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(IC= -0.5A, IB= -50mA)		V _{CE(sat)}	—	—	-0.5	V
Base-Emitter Saturation Voltage 基极发射极饱和压降(IC= -500mA, IB= -50mA)		V _{BE(sat)}	—	—	-1	V
Base-Emitter On Voltage 基极发射极导通电压(V _{CE} = -2V,IC= -0.5A)		V _{BE(on)}	—	—	-1	V
Transition Frequency 特征频率(V _{CE} = -10V, IC= -50mA)		f _T	100	—	—	MHz
Output Capacitance 输出电容(V _{CB} = -10V, IE=0, f=1MHz)		C _{ob}	—	15	—	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	—	1.800	—	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	—	0.030	—
θ	0°	10°	0°	10°