



# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

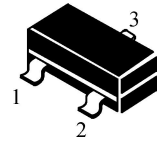
BC817W/BC818W

## SOT-323 Bipolar Transistor 双极型三极管

### ■ Features 特点

NPN General Purpose 通用

- 1. BASE
- 2. EMITTER
- 3. COLLECTOR



### ■ Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	BC817W- 16/25/40	BC818W- 16/25/40	Unit 单位
Collector-Base Voltage 集电极基极电压	$V_{CBO}$	50	30	V
Collector-Emitter Voltage 集电极发射极电压	$V_{CEO}$	45	25	V
Emitter-Base Voltage 发射极基极电压	$V_{EBO}$	5	5	V
Collector Current 集电极电流	$I_C$	500		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

$H_{FE}$		100-250(-16)	160-400(-25)	250-600(-40)
Mark	BC817W	6A	6B	6C
	BC818W	6E	6F	6G

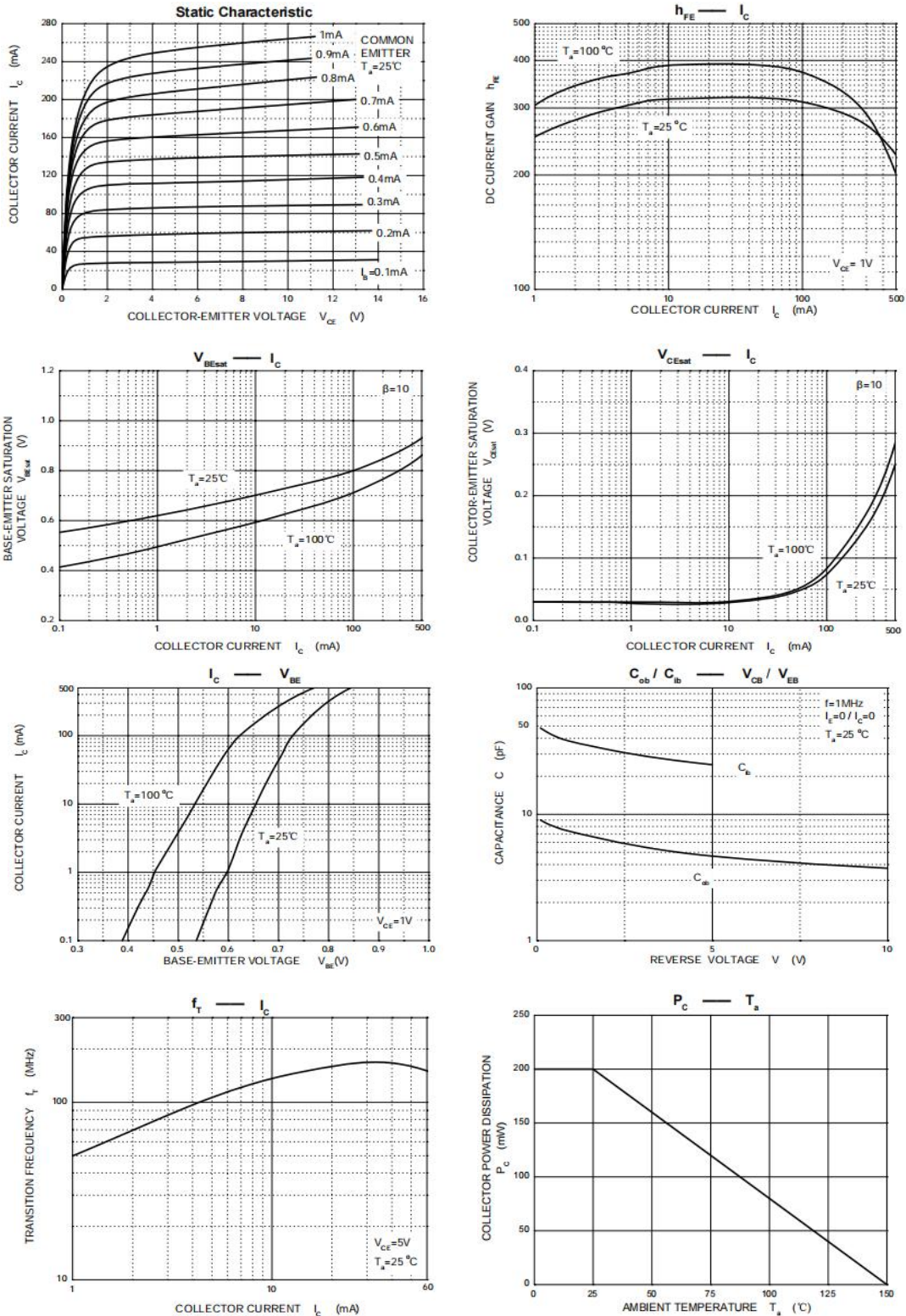


## ■Electrical Characteristics 电特性

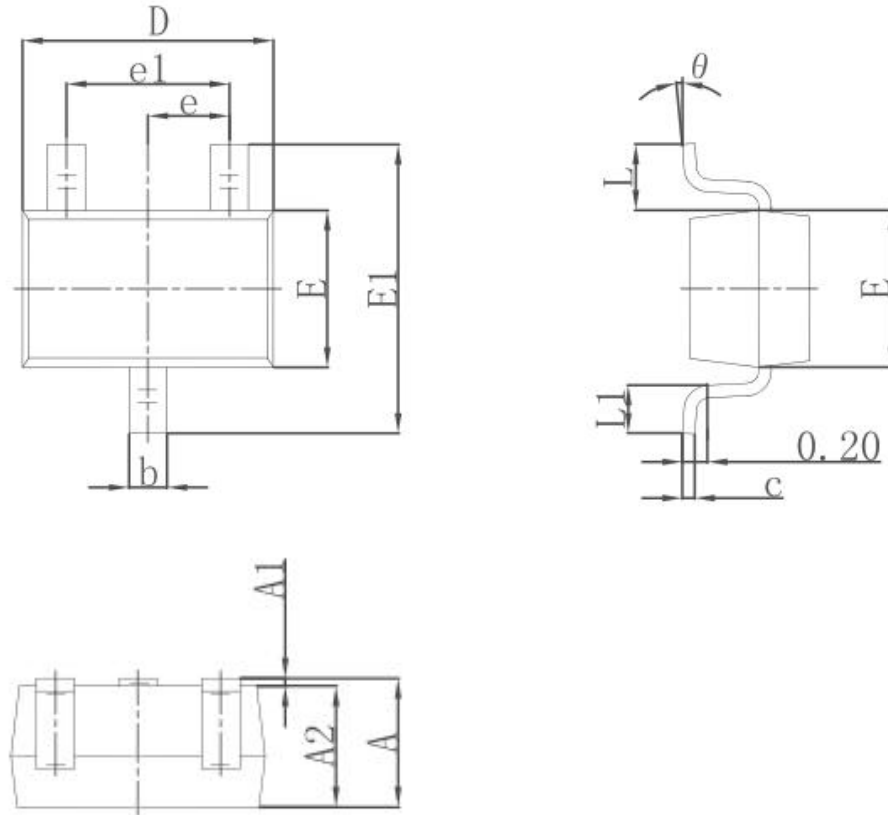
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

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 ( $I_C=10\mu\text{A}$ , $I_E=0$ )	BC817W-16/25/40 BC818W-16/25/40	$BV_{CBO}$	50 30	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 ( $I_C=10\text{mA}$ , $I_B=0$ )	BC817W-16/25/40 BC818W-16/25/40	$BV_{CEO}$	45 25	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压 ( $I_E=10\mu\text{A}$ , $I_C=0$ )		$BV_{EBO}$	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流	BC817W-16/25/40 ( $V_{CB}=50\text{V}, I_E=0$ ) BC818W-16/25/40 ( $V_{CB}=30\text{V}, I_E=0$ )	$I_{CBO}$	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流 ( $V_{EB}=4\text{V}$ , $I_C=0$ )		$I_{EBO}$	—	—	100	nA
DC Current Gain 直流电流增益 ( $V_{CE}=1\text{V}, I_C=100\text{mA}$ )	BC817W-16/BC818W-16 BC817W-25/BC818W-25 BC817W-40/BC818W-40	$H_{FE}$	100 160 250	—	250 400 600	
DC Current Gain 直流电流增益( $V_{CE}=1\text{V}, I_C=500\text{mA}$ )		$H_{FE}$	40			
Collector-Emitter Saturation Voltage 集电极发射极饱和压降( $I_C=500\text{mA}$ , $I_B=50\text{mA}$ )		$V_{CE(sat)}$	—	—	0.7	V
Base-Emitter Saturation Voltage 基极发射极饱和压降( $I_C=500\text{mA}$ , $I_B=50\text{mA}$ )		$V_{BE(sat)}$	—	—	1.2	V
Base-Emitter On Voltage 基极发射极导通电压( $V_{CE}=1\text{V}$ , $I_C=500\text{mA}$ )		$V_{BE(on)}$	—	—	1.2	V
Transition Frequency 特征频率( $V_{CE}=5\text{V}$ , $I_C=10\text{mA}$ )		$f_T$	100	—	—	MHz
Output Capacitance 输出电容( $V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$ )		$C_{ob}$	—	10	—	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
$\theta$	0°	8°	0°	8°