

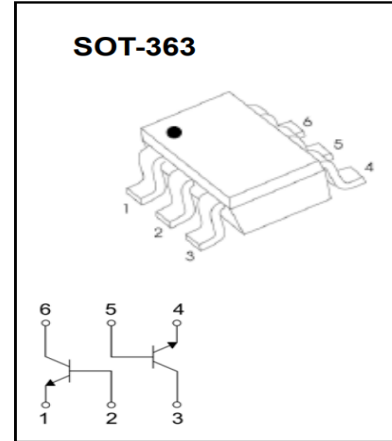


Plastic-Encapsulate Transistors

TRANSISTOR (NPN+NPN)

FEATURES

- For General AF Applications
- High Collector Current
- High Current Gain
- Low Collector-Emitter Saturation Voltage



MAXMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.5	A
P_C	Collector Dissipation	0.2	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

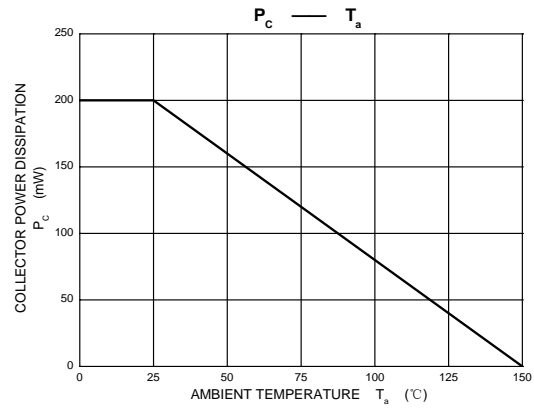
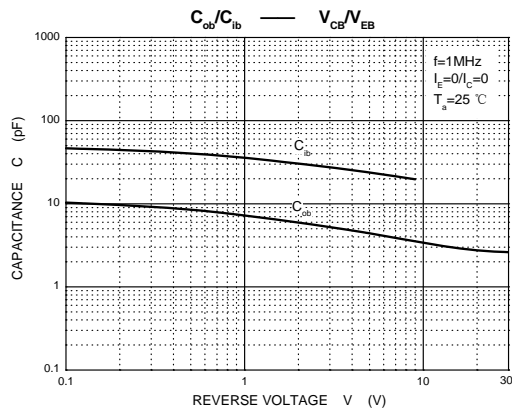
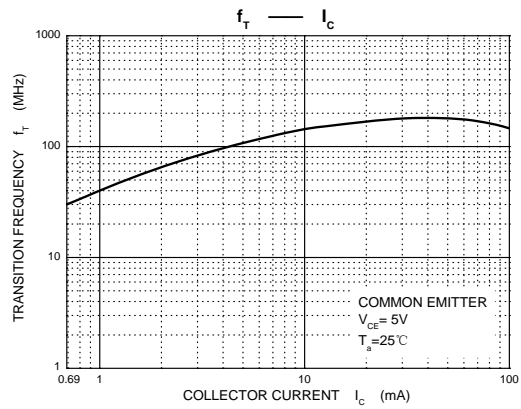
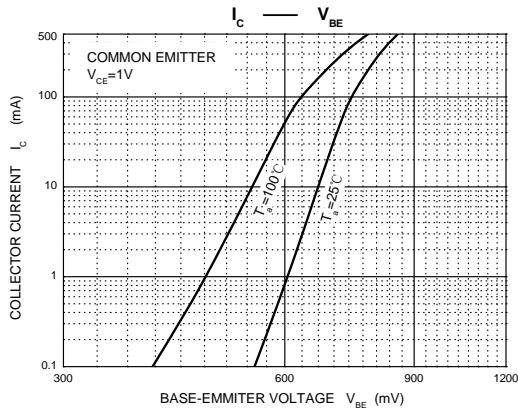
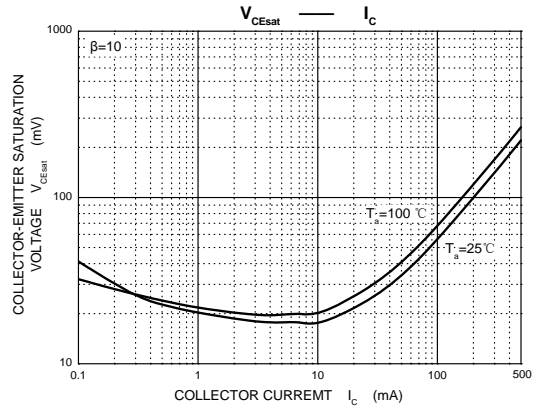
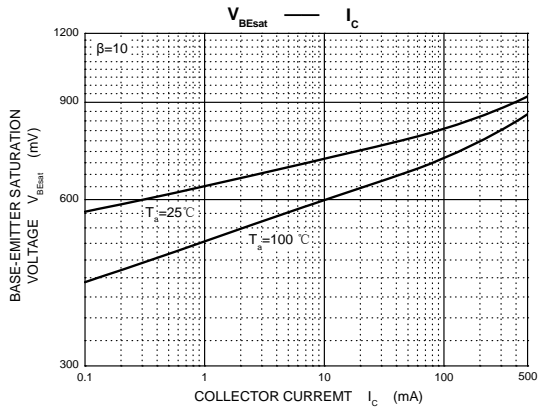
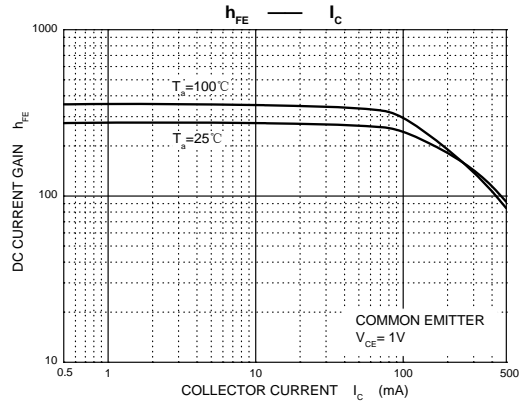
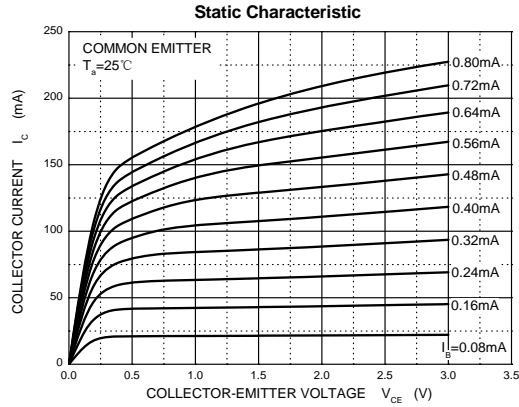
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=100\text{mA}$	100		600	
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.2	V
Base-emitter voltage	$V_{BE(ON)}$	$V_{CE}=1\text{V}, I_C=500\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$			5	pF

CLASSIFICATION of $h_{FE(1)}$

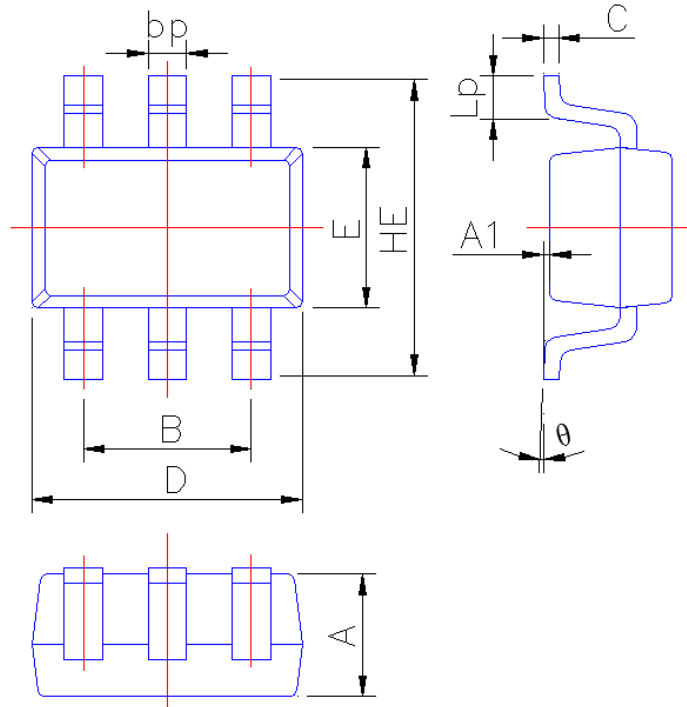
Rank	BC817-16DW	BC817-25DW	BC817-40DW
Range	100-250	160-400	250-600
Marking	S6A	S6B	S6C

Typical Characteristics





SOT-363 Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.00
A1	0.010	0.100
B	1.20	1.40
bp	0.25	0.45
C	0.09	0.15
D	2.00	2.20
E	1.15	1.35
HE	2.15	2.55
Lp	0.25	0.46
θ	0°	6°