

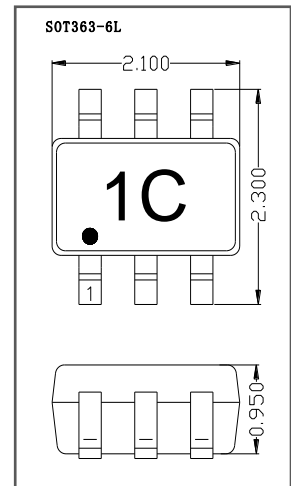
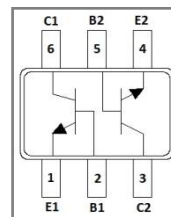
DATA SHEET

BC847BS

- ◇Epoxy meets UL 94 V-0 flammability rating
- ◇Lead Free Finish/RoHS Compliant
- ◇For Switching and AF Amplifier Applications
- ◇Rugged and reliable

Device Marking Code	
BC847BS	1C

Equivalent Circuit



MAXIMUM RATINGS (Ta = 25 °C)

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	45	V
V _{EBO}	Emitter-Base Voltage	6	V
P _C	Collector Power Dissipation	300	mW
I _C	Collector Current	200	mA
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 to 150	°C
R _{θJA}	Thermal Resistance from Junction to Ambient	417	°C/W

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =10μA, I _E =0	50			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA, I _B =0	45			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10μA, I _C =0	6			V
I _{CBO}	Collector cut-off current	V _{CB} =30V, I _E =0			15	nA
I _{EBO}	Emitter-Base Cutoff Current	V _{EB} =5V, I _C =0			100	nA
h _{FE}	DC current gain*	V _{CE} =5V, I _C =2mA	200		450	
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =10mA, I _B =0.5mA			0.25	V
		I _C =100mA, I _B =5mA			0.65	V
V _{BE(sat)}	Base-emitter voltage	I _C =10mA, I _B =0.5mA		0.9		V
		I _C =100mA, I _B =5mA		0.7		V
V _{BE}	Base-Emitter Voltage	V _{CE} =5V, I _C =2mA	0.58	0.665	0.7	V
f _T	Transition Frequency	V _{CE} =5V, I _C =10mA, f=100MHz		200		MHz
C _{ob}	Output Capacitance	V _{CB} =10V, I _E =0, f=1MHz		2		pF

*Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

TYPICAL CHARACTERISTICS

Fig. 1 - Static Characteristics

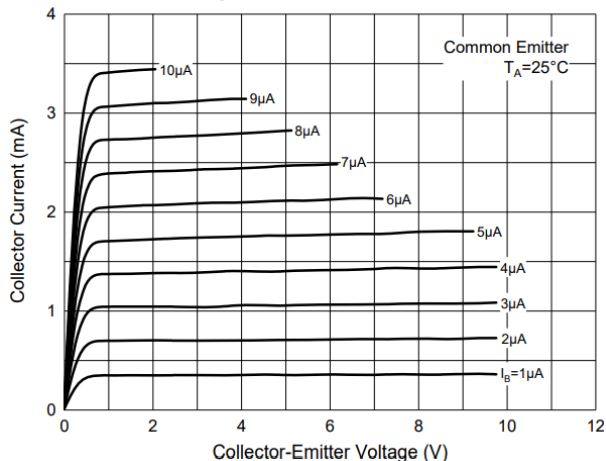


Fig. 2 - DC Current Gain Characteristics

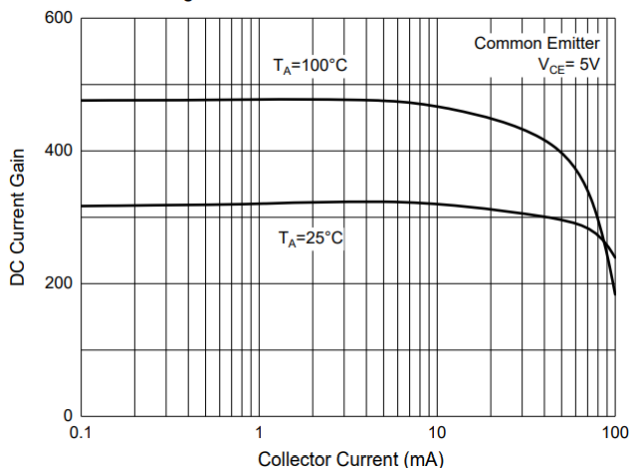


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

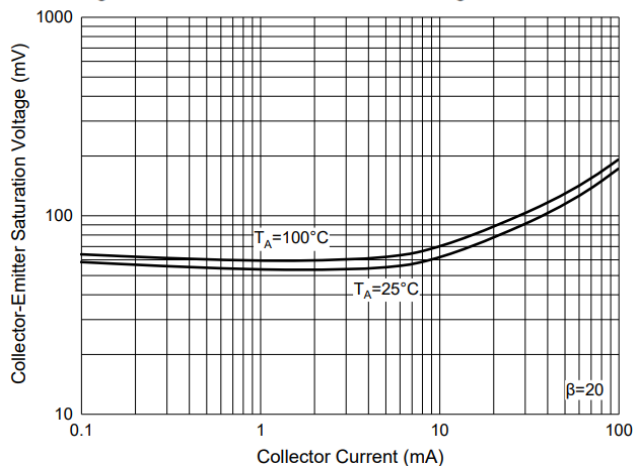


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

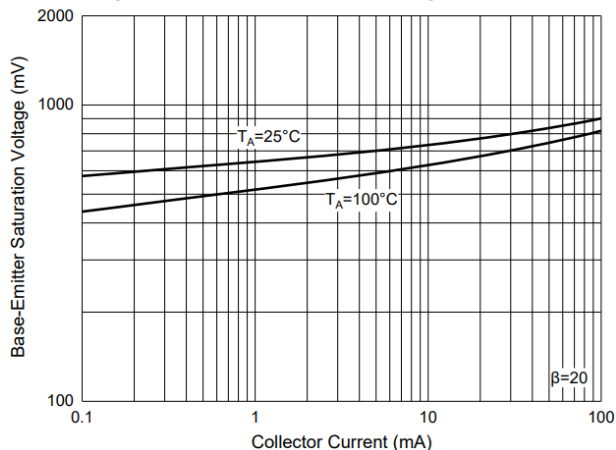


Fig. 5 - Base-Emitter Voltage Characteristics

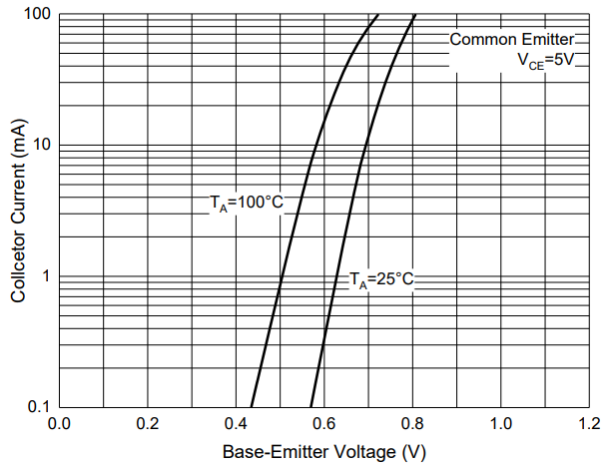
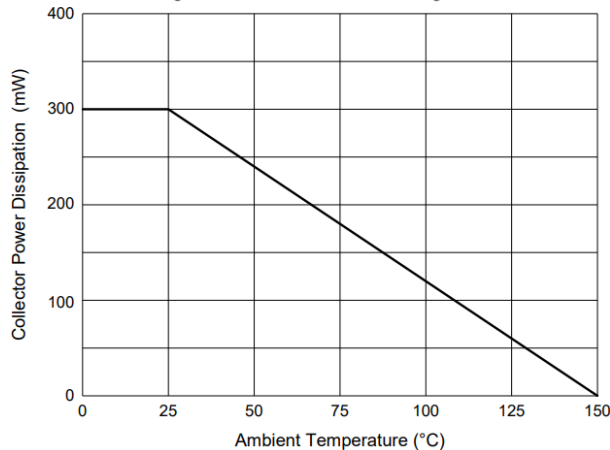


Fig. 6 - Collector Power Derating Curve



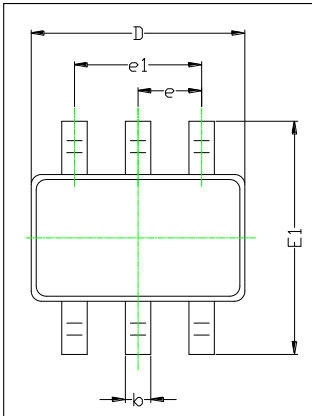
ORDERING INFORMATION

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
BC847BS	SOT363-6L	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

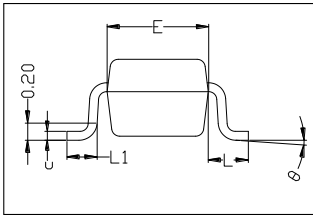
PACKAGE DIMENSIONS

Package outline : SOT363-6L

TOP VIEW

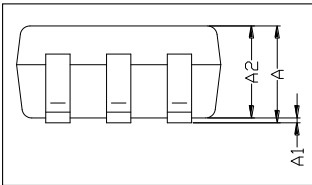


SIDE VIEW

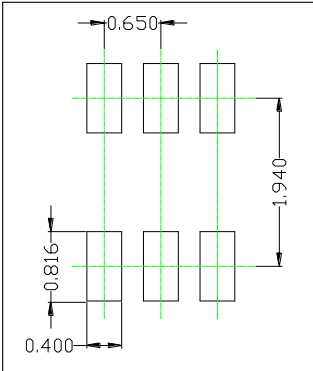


SYMBOL	DIMENSIONS IN MILLIMETER	
	MIN	MAX
A	0.900	1.000
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.100	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.400
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°

FRONT VIEW



SOLDERING PATTERN



Notice:

- Lead plating: Pb free solder
- Lead thickness includes solder plating
- Lead frame: CAC-5
- Other Tolerance: ±0.05
- Dimensions are exclusive of Burrs, Mold Flash and Tie Bar extrusions
- Unit: mm