

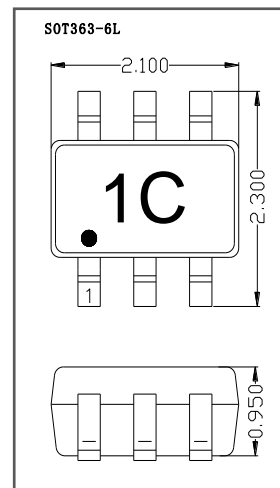
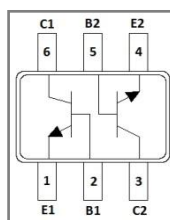
DATA SHEET

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
$R_{\theta JA}$	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	$I_C=10\mu A, I_E=0$	50			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA, I_B=0$	45			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu A, I_C=0$	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

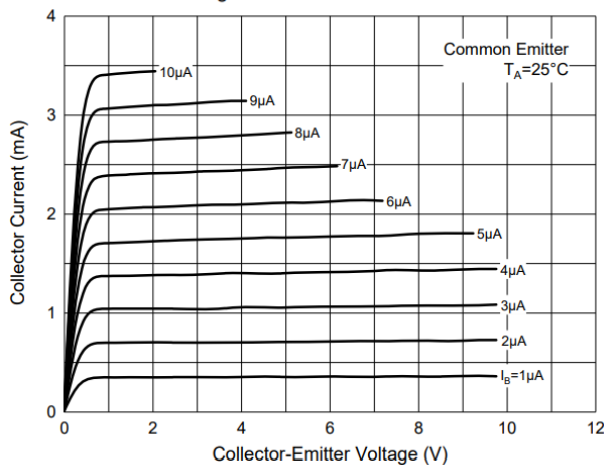


Fig. 2 - DC Current Gain Characteristics

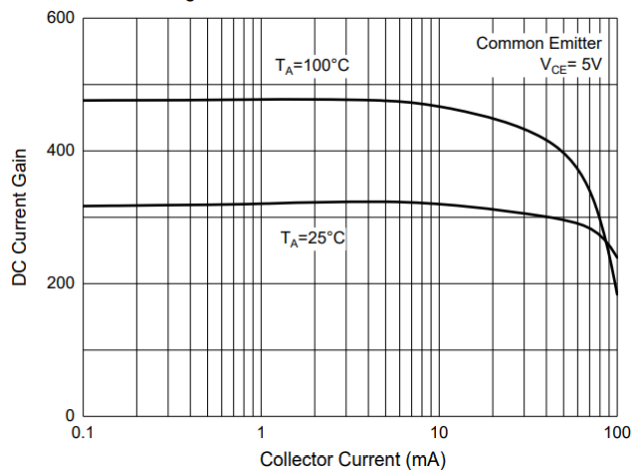


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

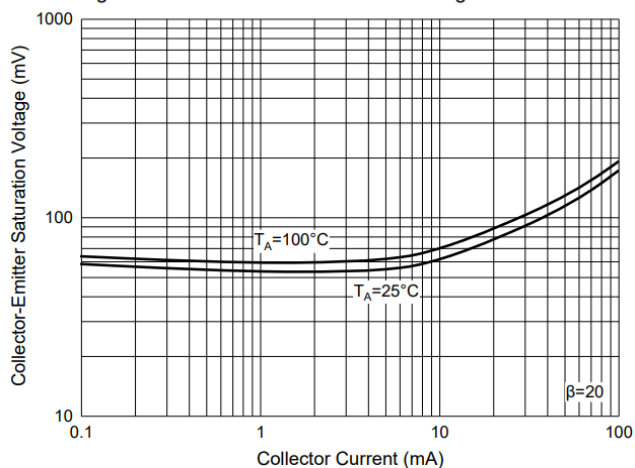


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

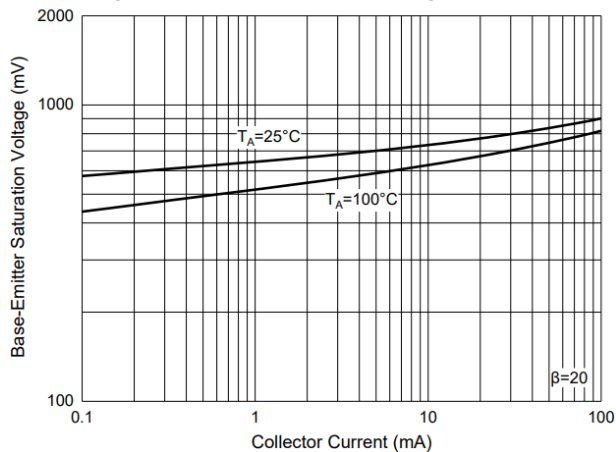


Fig. 5 - Base-Emitter Voltage Characteristics

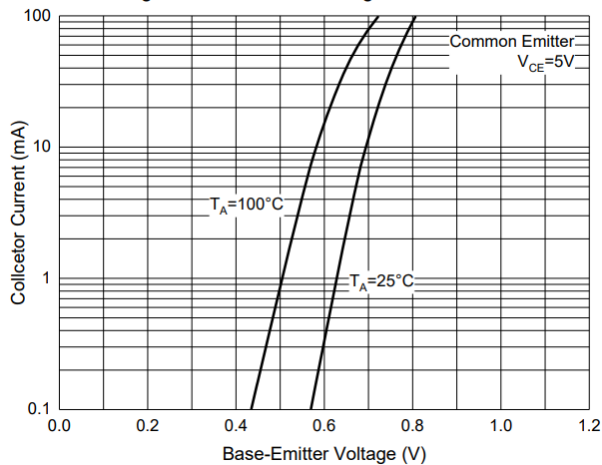
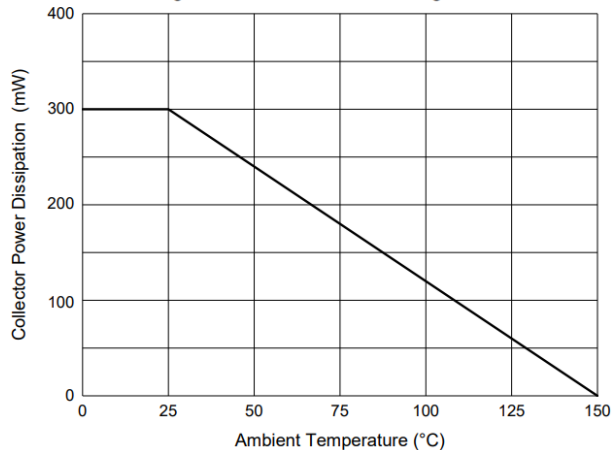


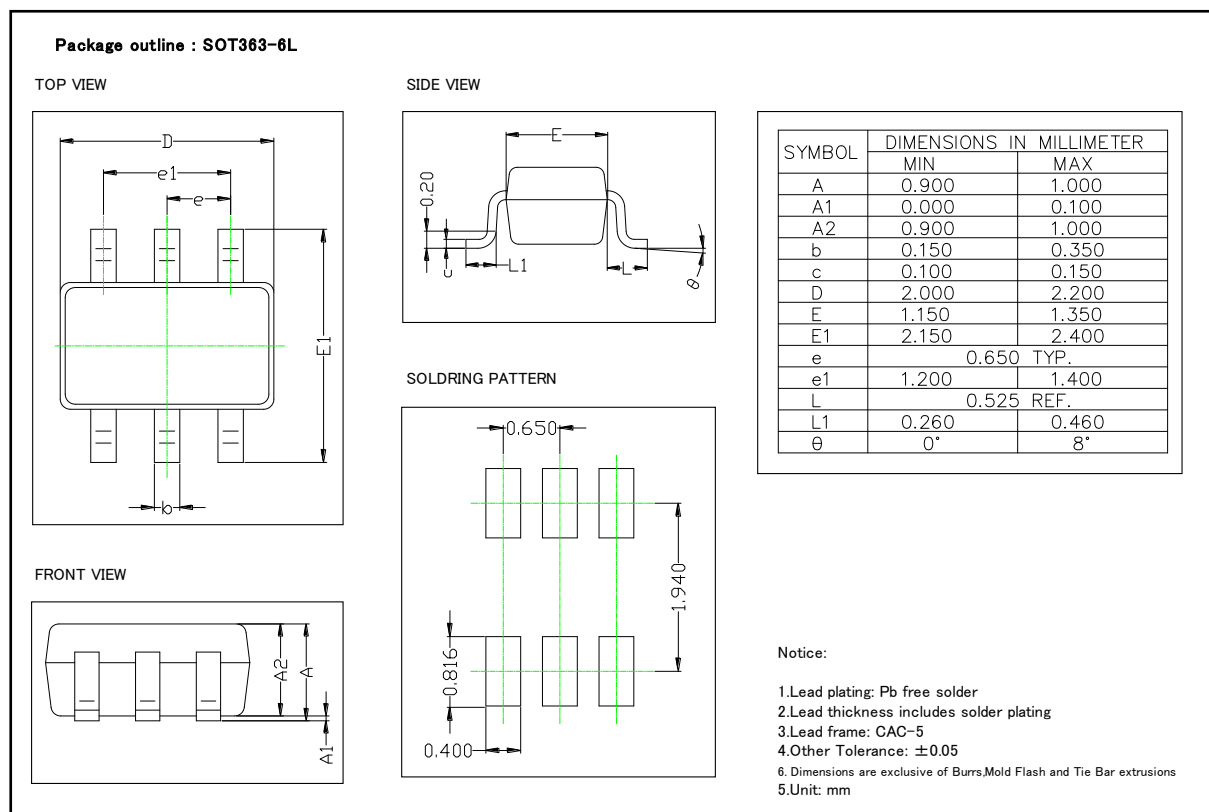
Fig. 6 - Collector Power Derating Curve



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



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