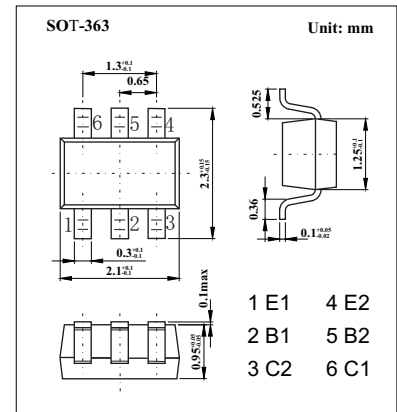
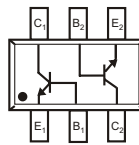


## NPN General Purpose Double Transistor BC847BS

### ■ Features

- Low collector capacitance
- Low collector-emitter saturation voltage
- Closely matched current gain
- Reduces number of components and board space
- No mutual interference between the transistors.



### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	45	V
Emitter-Base Voltage	$V_{EBO}$	6.0	V
Collector Current	$I_C$	100	mA
Total Device Dissipation $T_{amb} \leq 25^\circ\text{C}$	$P_D$	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	416	$^\circ\text{C}/\text{W}$
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

Note 1. Device mounted on an FR4 printed-circuit board.

### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{CB0}$	$I_C = 10 \mu\text{A}, I_E = 0$	50			V
Collector-Emitter Breakdown Voltage	$V_{CEO}$	$I_C = 10 \text{mA}, I_B = 0$	45			V
Emitter-Base Breakdown Voltage	$V_{EBO}$	$I_E = 10 \mu\text{A}, I_C = 0$	6.0			V
Collector-Cutoff Current	$I_{CBO}$	$V_{CB} = 30 \text{V}, I_E = 0$			15	nA
		$V_{CB} = 30 \text{V}, I_E = 0, T_A = 150^\circ\text{C}$			5.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$I_C = 2.0 \text{mA}, V_{CE} = 5.0 \text{V}$	200		450	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10 \text{mA}, I_B = 0.5 \text{mA}$			0.1	V
		$I_C = 100 \text{mA}, I_B = 5.0 \text{mA}$ (Note 2)			0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10 \text{mA}, V_{CE} = 5.0 \text{V}$		0.755		V
Collector Capacitance	$C_C$	$V_{CB} = 10 \text{V}, f = 1.0 \text{MHz}$			1.5	pF
Emitter Capacitance	$C_E$	$V_{EB} = 500 \text{mV}; f = 1 \text{MHz}$		11		pF
Transistion frequency	$f_T$	$I_C = 20 \text{mA}, V_{CE} = 5.0, f = 100 \text{mHz}$	100			MHz

Note 2. Pulse test:  $t_p \leq 300 \mu\text{s}; \delta \leq 0.02$ .