

# NPN General Purpose Transistor

## BC847B

### ●Features

- 1)  $BV_{CEO} < 45V$  ( $I_C = 1mA$ )
- 2) Complements the BC857B.

### ●Package, marking, and packaging specifications

Part No.	BC847B
Packaging type	SST3
Marking	G1F
Code	T116
Basic ordering unit (pieces)	3000

### ●Absolute maximum ratings ( $T_a = 25^\circ C$ )

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	50	V
Collector-emitter voltage	$V_{CEO}$	45	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	0.1	A
Collector power dissipation	$P_C$	0.2	W
		0.35	W *
Junction temperature	$T_J$	150	$^\circ C$
Storage temperature	$T_{stg}$	$-55 \sim +150$	$^\circ C$

\* When mounted on a 7x5 x 0.8 mm ceramic board.

### ●Electrical characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	50	—	—	V	$I_C = 50 \mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	45	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	$BV_{EBO}$	6	—	—	V	$I_E = 50 \mu A$
Collector cutoff current	$I_{CBO}$	—	—	15	$\mu A$	$V_{CB} = 30V$
		—	—	5		$V_{CB} = 30V, T_a = 150^\circ C$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.25	V	$I_C/I_B = 10mA/0.5mA$
		—	—	0.6		$I_C/I_B = 100mA/5mA$
Base-emitter saturation voltage	$V_{BE(on)}$	0.58	—	0.77	V	$V_{CE}/I_C = 5V/10mA$
DC current transfer ratio	$h_{FE}$	200	—	450	—	$V_{CE}/I_C = 5V/2mA$
Transition frequency	$f_T$	—	200	—	MHz	$V_{CE} = 5V, I_E = -20mA, f = 100MHz$
Collector output capacitance	$C_{ob}$	—	3	—	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$
Emitter input capacitance	$C_{ib}$	—	8	—	pF	$V_{EB} = 0.5V, I_C = 0, f = 1MHz$

### ●Electrical characteristic curves

The electrical characteristic curves for these products are the same as those of UMT222A, SST222A, MMST2222A and PN2222A. Refer to pages 621 and 623.

### ●External dimensions (Units : mm)

