

Features

- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- · Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

NPN Small Signal Transistor 300mW

Maximum Ratings

Operating Junction Temperature Range: -55°C to +150°C

Storage Temperature Range: -55°C to +150°C

• Thermal Resistance: 417 °C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CBO}	50	V
Collector-Emitter Voltage	V _{CEO}	45	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	500	mA
Peak Collector Current	I _{CM}	1000	mA
Power Dissipation@Ts=50 C (Note2)	Pc	300	mW

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. Device mounted on Ceramic Substrate 0.7mm X 2.5cm² area

Internal Structure

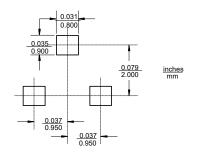


Marking: BC817-16: 6A BC817-25: 6B BC817-40: 6C

SOT-23

DIMENSIONS						
DIM	INCHES		MM		NOTE	
Dilvi	MIN	MAX	MIN	MAX	NOTE	
Α	0.110	0.120	2.80	3.04		
В	0.083	0.104	2.10	2.64		
С	0.047	0.055	1.20	1.40		
D	0.034	0.041	0.85	1.05		
E	0.067	0.083	1.70	2.10		
F	0.018	0.024	0.45	0.60		
G	0.0004	0.006	0.01	0.15		
Н	0.035	0.043	0.90	1.10		
J	0.003	0.007	0.08	0.18		
K	0.014	0.020	0.35	0.51		
L	0.007	0.020	0.20	0.50		

Suggested Solder Pad Layout





Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Тур	Max	Units	Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	50			V	I _C =10μA, I _E =0
Collector-Emitter Breakdown Voltage ^(Note3)	$V_{(BR)CEO}$	45			V	I _C =10mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5			V	I _E =1μA, I _C =0
Collector Cutoff Current	I _{CBO}			0.1	μΑ	V _{CB} =45V, I _E =0
Emitter-Base Cutoff Current	I _{EBO}			0.1	μΑ	V_{EB} =4V, I_{C} =0
DC Current Gain ^(Note3)	h _{FE1}	100		600		V _{CE} =1V, I _C =100mA
	h _{FE2}	40				V _{CE} =1V, I _C =500mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}			0.7	V	I _C =500mA, I _B =50mA
Base-Emitter Saturation Voltage	V _{BE(sat)}			1.2	V	I _C =500mA, I _B =50mA
Base-Emitter Voltage	V _{BE}			1.2	V	V _{CE} =1V, I _C =500mA
Collecter capactiance	C _{ob}		10		pF	V _{CB} =10V, f=1MHz,
Transition Frequency	f _T	100			MHz	V _{CE} =5V, I _C =10mA, f=100MHz

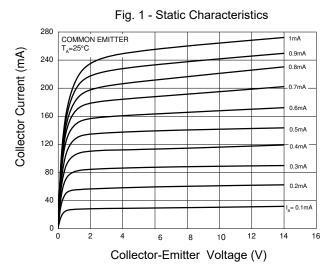
Note: 3. Pulse Width ≤ 300µs, Duty Cycle≤2.0%

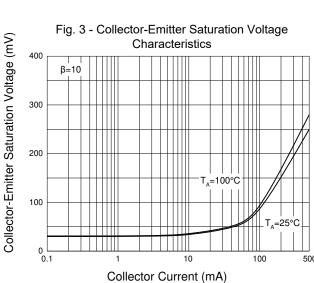
CLASSIFICATION OF hFE (1)

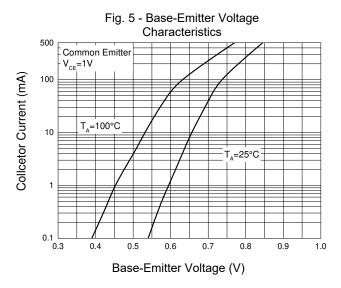
Rank	BC817-16	BC817-25	BC817-40	
Range	100-250	160-400	250-600	

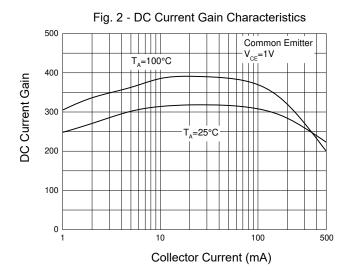


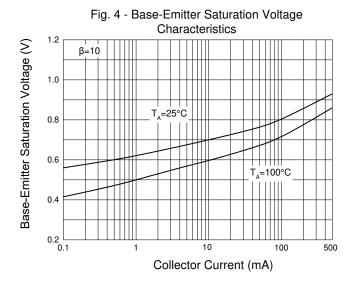
Curve Characteristics

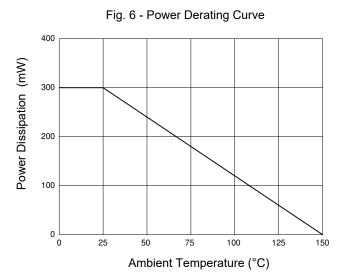














Ordering Information

Device	Packing		
Part Number-TP	Tape&Reel: 3Kpcs/Reel		

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