

Features

- · Epitaxial Die Construction
- Complementary PNP Type Available (BC857AT/BT/CT)
- 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)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 833°C/W Junction to Ambient (Note2)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CBO}	50	V
Collector-Emitter Voltage	V _{CEO}	45	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current	Ic	100	mA
Collector Power Dissipation(Note2)	P _C	150	mW

Classification Of h_{FE}

Rank	BC847AT	BC847BT	BC847CT	
Range	110-222	200-450	420-800	
Marking	1E	1F	1G	

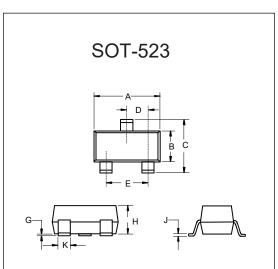
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. Device mounted on FR-4 PCB with recommended pad layout

Internal Structure

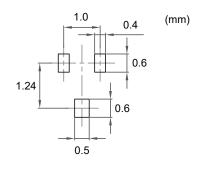


NPN Small Signal Surface Mount Transistor



DIMENSIONS					
DIM	INCHES		М	M	NOTE
DIIVI	MIN	MAX	MIN	MAX	NOTE
Α	0.059	0.067	1.50	1.70	
В	0.030	0.033	0.75	0.85	
С	0.057	0.069	1.45	1.75	
D	0.020		0.50		TYP.
Е	0.035	0.043	0.90	1.10	
G	0.000	0.004	0.00	0.10	
Н	0.024	0.031	0.60	0.80	
J	0.004	0.008	0.10	0.20	
K	0.006	0.014	0.15	0.35	

Suggested Solder Pad Layout





Electrical Characteristics @ 25°C Unless Otherwise Specified

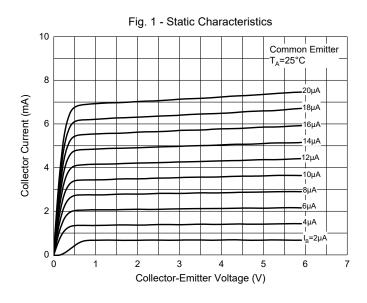
Parameter		Symbol	Min	Тур	Max	Units	Conditions	
Collector-Base Breakdown Voltage		V _{(BR)CBO}	50			V	$I_C=10\mu A, I_E=0$	
Collector-Emitter Breakdown Voltage		V _{(BR)CEO}	45			V	I _C =10mA, I _B =0	
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	6			V	$I_E=1\mu A, I_C=0$	
Collector-Base Cutoff Current		I _{CBO}			15	nA	V_{CB} =30V, I_E =0	
					5	μΑ	V _{CB} =30V, I _E =0, T _J =125°C	
DC Current Gain ^(Note3)	BC847AT		110		222			
	BC847BT	h _{FE}	200	290	450		V_{CE} =5V, I_{C} =2mA	
	BC847CT		420	520	800			
Collector-Emitter Saturation Voltage		V _{CE(sat)}			0.25	V	I _C =10mA, I _B =0.5mA	
					0.6	V	I _C =100mA, I _B =5mA	
Base-Emitter Saturation Voltage		V _{BE(sat)}		0.70		V	I _C =10mA, I _B =0.5mA	
				0.90		V	I _C =100mA, I _B =5mA	
Base-Emitter Voltage		V _{BE}	0.58	0.66	0.70	V	V _{CE} =5V, I _C =2mA	
					0.77	V	V _{CE} =5V, I _C =10mA	
Transition Frequency		f⊤	100			MHz	V _{CE} =5V, I _C =10mA, f=100MHz	
Collector-Base Capacitance		C _{CBO}			4.5	pF	V _{CB} =10V, f=1MHz	
Noise Figure	BC847BT	NF			10	dB	V _{CE} =5V, I _C =0.2mA	
	BC847CT	INI			4	dB	R_S =2KΩ, f=1KHz, BW=200Hz	

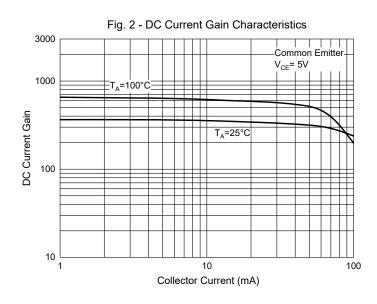
Note: 3. Short duration pulse test used to minimize self-heating effect.

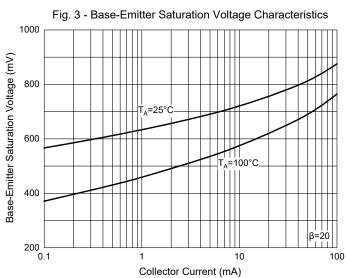
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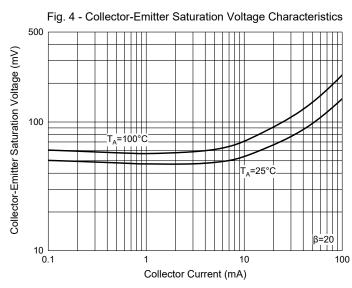


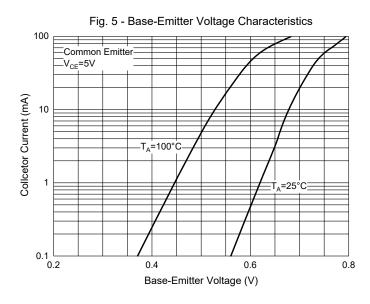
Curve Characteristics

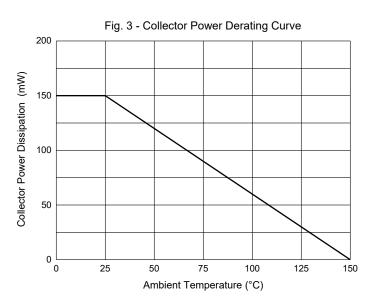














Ordering Information

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

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