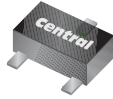


BC846T SERIES
BC847T SERIES

SURFACE MOUNT
NPN SILICON TRANSISTOR

ULTRAmini™



SOT-523 CASE



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR BC846T and BC847T Series types are NPN Silicon Transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for general purpose switching and amplifier applications.

MARKING CODE: SEE MARKING CODE TABLE
ON FOLLOWING PAGE

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Peak Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	BC847T	BC846T	UNITS
V_{CB0}	50	80	V
V_{CEO}	45	65	V
V_{EBO}		5.0	V
I_C		100	mA
I_{CM}		200	mA
I_{BM}		100	mA
P_D		250	mW
T_J, T_{stg}	-65 to +150		$^\circ\text{C}$
θ_{JA}		500	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{CBO}	V _{CB} =30V			15	nA
I _{CBO}	V _{CB} =30V, T _A =150°C			5.0	μA
I _{EBO}	V _{EB} =5.0V			100	nA
BV _{CBO}	I _C =10μA (BC847T)	50			V
BV _{CBO}	I _C =10μA (BC846T)	80			V
BV _{CEO}	I _C =10mA (BC847T)	45			V
BV _{CEO}	I _C =10mA (BC846T)	65			V
BV _{EBO}	I _E =10μA	5.0			V
V _{CE(SAT)}	I _C =10mA, I _B =0.5mA			0.20	V
V _{CE(SAT)}	I _C =100mA, I _B =5.0mA			0.40	V
V _{BE(ON)}	I _C =2.0mA, V _{CE} =5.0V	0.58		0.70	V
V _{BE(ON)}	I _C =10mA, V _{CE} =5.0V			0.77	V
f _T	V _{CE} =5.0V, I _C =10mA, f=100MHz	100			MHz
C _c	V _{CB} =10V, I _E =0, f=1.0MHz			1.5	pF
C _e	V _{EB} =0.5V, I _C =0, f=1.0MHz		11		pF
NF	V _{CE} =5.0V, I _C =200μA, R _S =2.0KΩ f=1.0KHz, BW=200Hz			10	dB
		<u>BC846AT</u>		<u>BC846BT</u>	
		<u>BC847AT</u>		<u>BC847BT</u>	
		MIN	MAX	MIN	MAX
h _{FE}	V _{CE} =5.0V, I _C =2.0mA	110	220	200	450
				<u>BC847CT</u>	
		MIN	MAX	MIN	MAX
				420	800

R1 (20-November 2009)

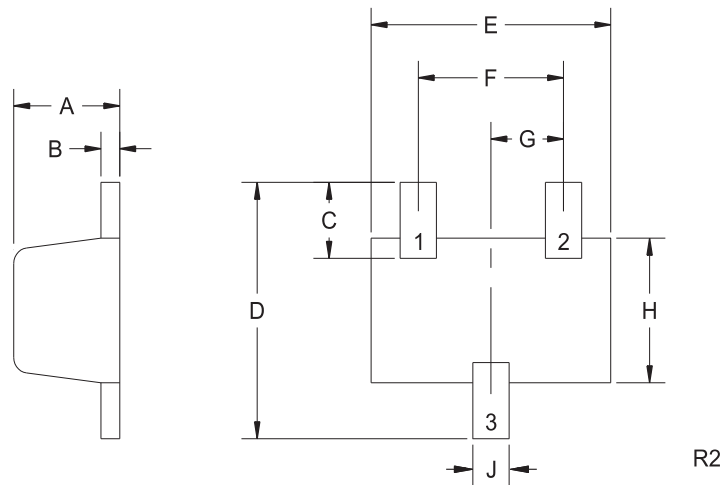
BC846T SERIES
BC847T SERIES

SURFACE MOUNT
NPN SILICON TRANSISTOR



SOT-523 CASE - MECHANICAL OUTLINE

BOTTOM VIEW



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

DEVICE	MARKING CODE
BC846AT	GT1
BC846BT	GT2
BC847AT	GT3
BC847BT	GT4
BC847CT	GT5

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.023	0.031	0.58	0.78
B	0.002	0.008	0.04	0.20
C	0.013	0.021	0.34	0.54
D	0.059	0.067	1.50	1.70
E	0.059	0.067	1.50	1.70
F	0.035	0.043	0.90	1.10
G	0.020		0.50	
H	0.031	0.039	0.78	0.98
J	0.010	0.014	0.25	0.35

SOT-523 (REV: R2)

R1 (20-November 2009)

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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
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