

**BC846T SERIES  
BC847T SERIES**

**SURFACE MOUNT  
NPN SILICON TRANSISTOR**

**ULTRAmimi™**



**SOT-523 CASE**

# Central™

**Semiconductor Corp.**

**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: PLEASE SEE MARKING CODE TABLE ON FOLLOWING PAGE**

**MAXIMUM RATINGS** (T<sub>A</sub>=25°C)

	SYMBOL	BC847T	BC846T	UNITS
Collector-Base Voltage	V <sub>CBO</sub>	50	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	45	65	V
Emitter-Base Voltage	V <sub>EBO</sub>		5.0	V
Collector Current	I <sub>C</sub>		100	mA
Peak Collector Current	I <sub>CM</sub>		200	mA
Peak Base Current	I <sub>BM</sub>		100	mA
Power Dissipation	P <sub>D</sub>		250	mW
Operating and Storage				
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>		-65 to +150	°C
Thermal Resistance	θ <sub>JA</sub>		500	°C/W

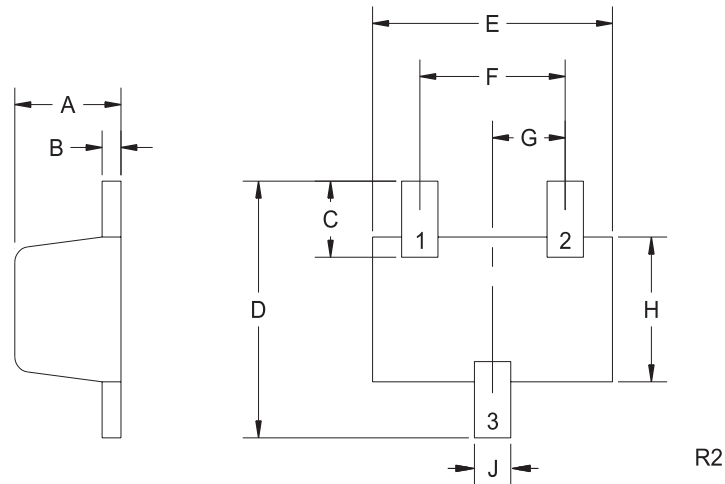
**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> = 30V			15	nA
I <sub>CBO</sub>	V <sub>CB</sub> = 30V, T <sub>A</sub> =150°C			5.0	μA
I <sub>EBO</sub>	V <sub>EB</sub> =5.0V			100	nA
BV <sub>CBO</sub>	I <sub>C</sub> =10μA (BC847T)	50			V
BV <sub>CBO</sub>	I <sub>C</sub> =10μA (BC846T)	80			V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA (BC847T)	45			V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA (BC846T)	65			V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	5.0			V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA			0.2	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =5.0mA			0.4	V
V <sub>BE(ON)</sub>	I <sub>C</sub> =2.0mA, V <sub>CE</sub> =5.0V	0.58		0.70	V
V <sub>BE(ON)</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =5.0V			0.77	V
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA, f=100MHz	100			MHz
C <sub>c</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz			1.5	pF
C <sub>e</sub>	V <sub>EB</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz		11		pF
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =200μA, R <sub>S</sub> =2KΩ, f= 1KHz, BW=200Hz			10	dB

	SYMBOL	TEST CONDITIONS	BC846AT		BC846BT		BC847CT	
			MIN	MAX	MIN	MAX	MIN	MAX
h <sub>FE</sub>		V <sub>CE</sub> =5.0V, I <sub>C</sub> =2.0mA	110	220	200	450	420	800

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

SYMBOL	DIMENSIONS			
	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)

This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.