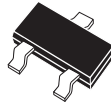


BC846 SERIES
BC847 SERIES
BC848 SERIES

SURFACE MOUNT
NPN SILICON TRANSISTOR



SOT-23 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BC846, BC847 and BC848 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

Note: Reverse Lead Codes Available, Add "R" to the end of the Part # and Marking Code.

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

	SYMBOL	BC848	BC847	BC846	UNITS
Collector-Base Voltage	V_{CBO}	30	50	80	V
Collector-Emitter Voltage	V_{CEO}	30	45	65	V
Emitter-Base Voltage	V_{EBO}		5.0		V
Collector Current	I_C		100		mA
Peak Collector Current	I_{CM}		200		mA
Peak Base Current	I_{BM}		200		mA
Power Dissipation	PD		350		mW
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +150		$^\circ\text{C}$
Thermal Resistance	Θ_{JA}		357		$^\circ\text{C/W}$

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

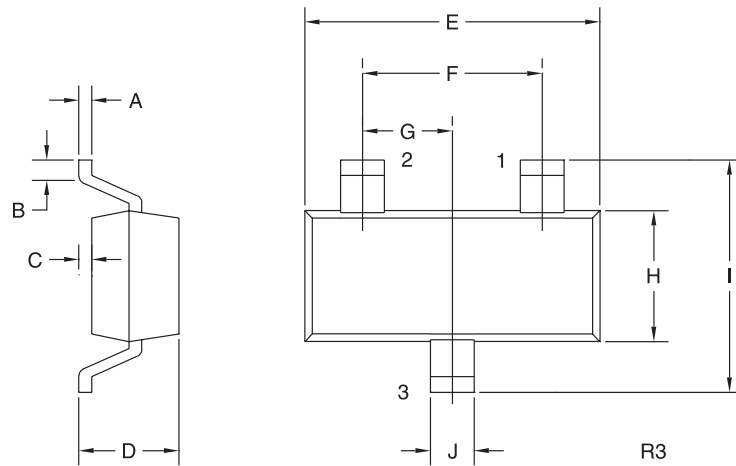
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$			15	nA
I_{CBO}	$V_{CB}=30\text{V}, T_A=150^\circ\text{C}$			5.0	μA
I_{EBO}	$V_{EB}=5.0\text{V}$			100	nA
BV_{CBO}	$I_C=10\mu\text{A}$ (BC848)	30			V
BV_{CBO}	$I_C=10\mu\text{A}$ (BC847)	50			V
BV_{CBO}	$I_C=10\mu\text{A}$ (BC846)	80			V
BV_{CEO}	$I_C=10\text{mA}$ (BC848)	30			V
BV_{CEO}	$I_C=10\text{mA}$ (BC847)	45			V
BV_{CEO}	$I_C=10\text{mA}$ (BC846)	65			V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.25	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=5.0\text{mA}$			0.6	V
$V_{BE(ON)}$	$I_C=2.0\text{mA}, V_{CE}=5.0\text{V}$	0.58		0.70	V
$V_{BE(ON)}$	$I_C=10\text{mA}, V_{CE}=5.0\text{V}$			0.77	V
f_T	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100			MHz
NF	$V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_S=2\text{K}\Omega, f=1\text{KHz}, \text{BW}=200\text{Hz}$			10	dB

		<u>BC846A</u>		<u>BC846B</u>		<u>BC847C</u>	
		<u>BC847A</u>		<u>BC847B</u>		<u>BC848C</u>	
		<u>BC848A</u>		<u>BC848B</u>		<u>BC848C</u>	
		MIN	MAX	MIN	MAX	MIN	MAX
hFE	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	110	220	200	450	420	800

R0 (29-October 2003)

**SURFACE MOUNT
NPN SILICON TRANSISTOR**

SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

STANDARD	*REVERSE
1) BASE	1) EMITTER
2) EMITTER	2) BASE
3) COLLECTOR	3) COLLECTOR

DEVICE	MARKING CODE
BC846A	1A
BC846B	1B
BC847A	1E
BC847B	1F
BC847C	1G
BC848A	1J
BC848B	1K
BC848C	1L

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

* Reverse Lead Codes Available, Add "R" to the end of the Part # and Marking Code.