

BC846 SERIES
BC847 SERIES
BC848 SERIES

SURFACE MOUNT
NPN SILICON TRANSISTOR



SOT-23 CASE



www.centrasemi.com

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: 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°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	BC848	BC847	BC846	UNITS
V _{CB0}	30	50	80	V
V _{CEO}	30	45	65	V
V _{EBO}		5.0		V
I _C		100		mA
I _{CM}		200		mA
I _{BM}		200		mA
P _D		350		mW
T _J , T _{stg}		-65 to +150		°C
θ _{JA}		357		°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	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 _{CB0}	I _C =10μA (BC848)	30		V
BV _{CB0}	I _C =10μA (BC847)	50		V
BV _{CB0}	I _C =10μA (BC846)	80		V
BV _{CEO}	I _C =10mA (BC848)	30		V
BV _{CEO}	I _C =10mA (BC847)	45		V
BV _{CEO}	I _C =10mA (BC846)	65		V
BV _{EBO}	I _E =10μA	5.0		V
V _{CE(SAT)}	I _C =10mA, I _B =0.5mA		0.25	V
V _{CE(SAT)}	I _C =100mA, I _B =5.0mA		0.60	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
NF	V _{CE} =5.0V, I _C =200μA, R _S =2.0KΩ, f=1.0KHz, BW=200Hz		10	dB

	TEST CONDITIONS	BC846A		BC846B		BC847C	
		MIN	MAX	MIN	MAX	MIN	MAX
h _{FE}	V _{CE} =5.0V, I _C =2.0mA	110	220	200	450	420	800

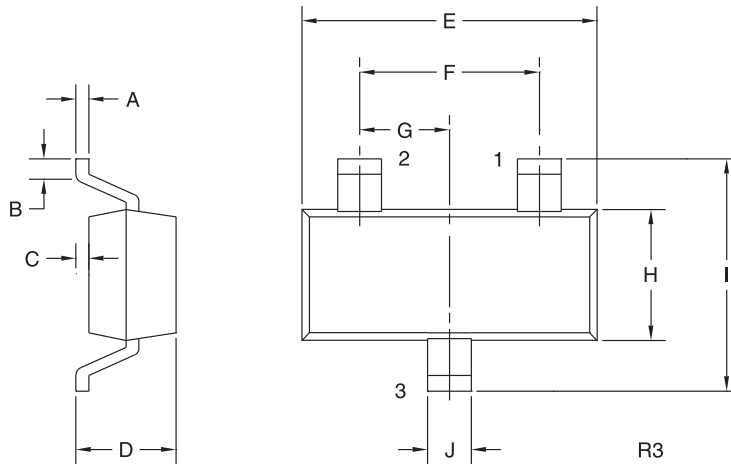
R1 (20-November 2009)

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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)

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