

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

**BSW67
BSW68**

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR BSW67, BSW68 types are Silicon NPN Epitaxial Planar Transistors designed for high voltage inductive load switching applications.

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

	<u>SYMBOL</u>	<u>BSW67</u>	<u>BSW68</u>	<u>UNITS</u>
Collector-Base Voltage	V_{CBO}	120	150	V
Collector-Emitter Voltage	V_{CEO}	120	150	V
Emitter-Base Voltage	V_{EBO}	6.0		V
Collector Current	I_C	1.0		A
Collector Current (Peak)	I_{CM}	2.0		A
Power Dissipation ($T_A=25^{\circ}\text{C}$)	P_D	800		mW
Power Dissipation	P_D	5.0		W
Operating and Storage				
Junction Temperature	T_J, T_{stg}	-65 to +200		$^{\circ}\text{C}$
Thermal Resistance	Θ_{JA}	220		$^{\circ}\text{C/W}$
Thermal Resistance	Θ_{JC}	35		$^{\circ}\text{C/W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>BSW67</u>		<u>BSW68</u>		<u>UNITS</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}$		100		100	μA
I_{CBO}	$V_{CB}= \frac{1}{2} \text{ Rated } V_{CBO}$		100		100	nA
I_{CBO}	$V_{CB}= \frac{1}{2} \text{ Rated } V_{CBO}, T_C=150^{\circ}\text{C}$		50		50	μA
I_{EBO}	$V_{EB}=3.0\text{V}$		100		100	nA
I_{EBO}	$V_{EB}=6.0\text{V}$		100		100	μA
BV_{CEO}	$I_C=10\text{mA}$	120		150		V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		150		150	mV
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		400		400	mV
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=150\text{mA}$		1.0		1.0	V
$V_{BE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		0.9		0.9	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.1		1.1	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=150\text{mA}$		1.2		1.2	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	30		30		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	40		40		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	30		30		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$	15		15		

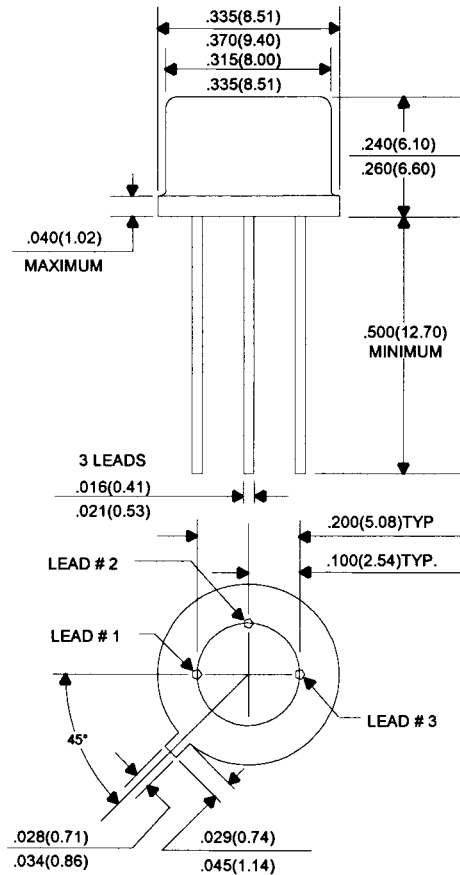
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ELECTRICAL CHARACTERISTICS (Continued)

SYMBOL	TEST CONDITIONS	BSW67		BSW68		UNITS
		MIN	MAX	MIN	MAX	
f_T	$V_{CE}=20V, I_C=100mA, f=100MHz$	130 TYP		130 TYP		MHz
C_{ob}	$V_{CB}=10V, I_E=0, f=1.0MHz$	20		20		pF
C_{ib}	$V_{EB}=0V, I_C=0, f=1.0MHz$	300		300		pF
t_{on}	$V_{CC}=20V, I_C=500mA, I_{B1}=I_{B2}=50mA$	500 TYP		500 TYP		ns
t_{off}	$V_{CC}=20V, I_C=500mA, I_{B1}=I_{B2}=50mA$	900 TYP		900 TYP		ns

JEDEC TO-39 CASE - MECHANICAL OUTLINE

All Dimensions in Inches (mm).



Lead Code:

- 1) Emitter
- 2) Base
- 3) Collector

CentralTM
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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

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