

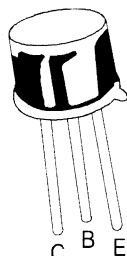
# New Jersey Semi-Conductor Products, Inc.

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## PNP SILICON PLANAR TRANSISTOR

BSS44



TO-39

Metal Can Package

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	$V_{CBO}$	65	V
Collector Emitter Voltage	$V_{CEO}$	60	V
Emitter Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	5	A
Total Power Dissipation	$P_D$	$T_c \leq 25^\circ\text{C}$	5
		$T_a \leq 25^\circ\text{C}$	0.87
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	- 65 to +200	$^\circ\text{C}$

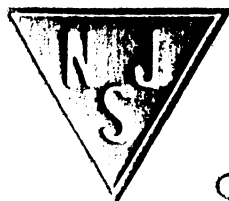
### THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	35	$^\circ\text{C/W}$
Junction to Ambient in free air	$R_{th(j-a)}$	200	$^\circ\text{C/W}$

### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	$I_{CES}$	$V_{CB}=60\text{V}, V_{BE}=0$			0.5	$\mu\text{A}$
Collector Base Breakdown Voltage	$V_{CBO(BR)}$	$I_C=1\text{mA}, I_E=0$	65			V
Collector Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C=50\text{mA}, I_B=0$	60			V
Emitter Base Voltage	$V_{EBO}$	$I_E=100\mu\text{A}, I_C=0$	6			V
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=0.5\text{A}, I_B=50\text{mA}$		0.1		V
		$I_C=5\text{A}, I_B=0.5\text{A}$		0.4	1	
Base Emitter Saturation Voltage	$*V_{BE(sat)}$	$I_C=0.5\text{A}, I_B=50\text{mA}$		0.8		V
		$I_C=5\text{A}, I_B=0.5\text{A}$		1.1	1.6	
DC Current Gain	$*h_{FE}$	$I_C=0.5\text{A}, V_{CE}=2\text{V}$	30			
		$I_C=2\text{A}, V_{CE}=2\text{V}$	40	70		
		$I_C=5\text{A}, V_{CE}=2\text{V}$		45		
Transition Frequency	$f_T$	$I_C=0.5\text{A}, V_{CE}=5\text{V}$		80		MHz
Collector-base Capacitance	$C_{CBO}$	$I_E=0, V_{CB}=10\text{V}, f=1\text{MHz}$			100	pF

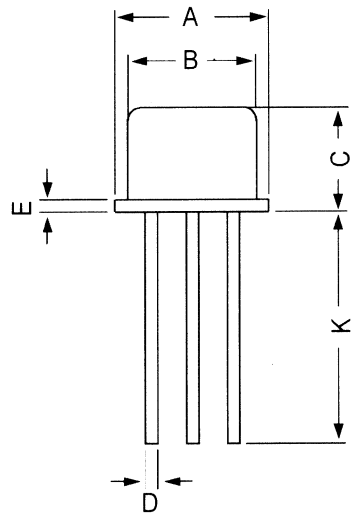
\*Pulse Test: Pulse Width = 300 $\mu\text{s}$ , Duty Cycle  $\leq 1.5\%$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

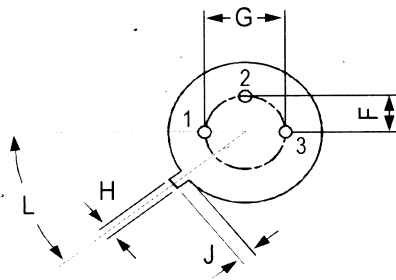
Quality Semi-Conductors

## TO-39 Metal Can Package



All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG



PIN CONFIGURATION  
 1. EMITTER  
 2. BASE  
 3. COLLECTOR