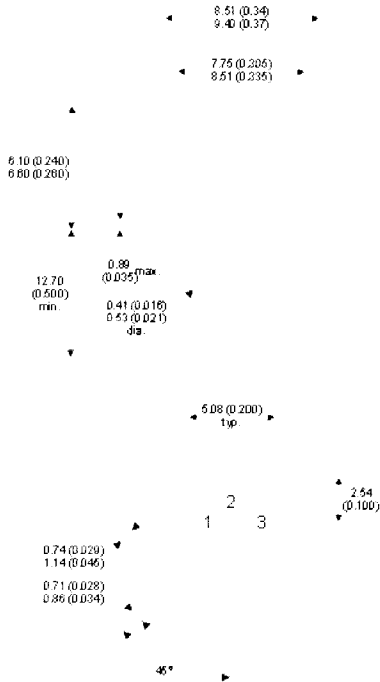


BUX54

MECHANICAL DATA

Dimensions in mm(inches)



TO39 (TO-205AD)

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

**NPN SILICON
TRANSISTOR**

FEATURES

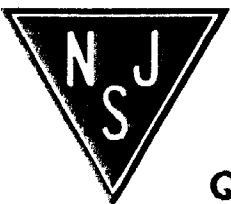
- FAST SWITCHING
- HIGH PULSE POWER

APPLICATIONS

- POWER SWITCHING CIRCUITS
- MOTOR CONTROL

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector - Base Voltage	450V
V_{CEX}	Collector - Emitter Voltage ($V_{BE} = -1.5V$)	450V
V_{CEO}	Collector - Emitter Voltage	400V
V_{EBO}	Emitter - Base Voltage	7V
I_C	Collector Current	2A
I_{CM}	Peak Collector Current ($t_p = 10$ ms)	5A
I_B	Base Current	0.375A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^{\circ}C$	10W
T_j, T_{stg}	Maximum Junction And Storage Temperature Range	$-65^{\circ}C$ to $+200^{\circ}C$



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.

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BUX54

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(sus)}$	Collector - Emitter Sustaining Voltage $I_C = 200mA$ $L = 25mH$ $I_B = 0A$	400			V
I_{CEX}	Collector Emitter Cut-off Current $V_{CE} = 450V$ $V_{BE} = -1.5V$ $T_C = 125^{\circ}C$			0.1 0.5	mA
$V_{CE(sat)*}$	Collector - Emitter Saturation Voltage $I_C = 0.6A$ $I_C = 1.2A$ $I_B = 0.06A$ $I_B = 0.15A$			0.5 1.3	V
$V_{BE(sat)*}$	Base - Emitter Saturation Voltage $I_C = 1.2A$ $I_B = 0.15A$			1.5	V
f_t	Transition Frequency $V_{CE} = 10V$ $I_C = 0.2A$ $f = 5MHz$	8			MHz
$t_d + t_r$	Turn-On Time $I_C = 1.2A$ $I_B = 0.15A$			0.25	
t_f	Fall Time $I_C = 1.2A$ $I_{B2} = 0.15A$			1.2	μs
t_s	Carrier Storage Time $I_C = 1.2A$ $I_{B2} = 0.15A$			3.5	

*Pulsed $t_p = 300\mu s @ < 1\%$

THERMAL CHARACTERISTICS

$R_{\theta JC}$ Junction to Case Thermal Resistance	17.5 $^{\circ}C/W$
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