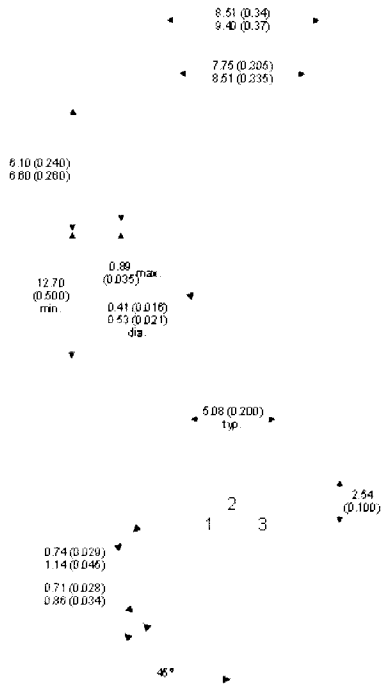


## BUX54

### MECHANICAL DATA

Dimensions in mm(inches)



TO39 (TO-205AD)

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

## NPN SILICON TRANSISTOR

### FEATURES

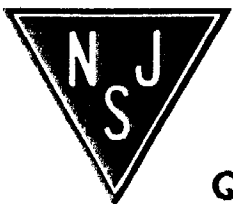
- FAST SWITCHING
- HIGH PULSE POWER

### 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.

Quality Semi-Conductors

# 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 $I_C = 200mA$ $L = 25mH$	400			V
$I_{CEX}$	Collector Emitter Cut-off Current $V_{CE} = 450V$ $T_C = 125^{\circ}C$			0.1 0.5	mA
$V_{CE(sat)}$ *	Collector - Emitter Saturation Voltage $I_C = 0.6A$ $I_C = 1.2A$			0.5 1.3	V
$V_{BE(sat)}$ *	Base - Emitter Saturation Voltage $I_C = 1.2A$			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	$\mu s$
$t_s$	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 $^{\circ}C/W$
---	--------------------