

Silicon NPN Power Transistors

BUY70B

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 325V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 5.0V(\text{Max.}) @ I_C = 4A$

APPLICATIONS

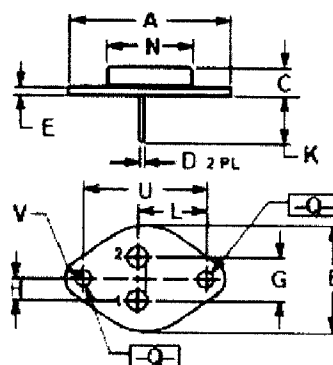
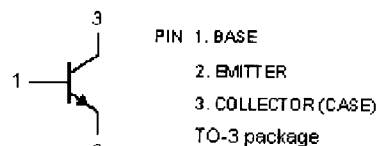
- Designed for switching mode power supplies, inverters, and CRT scanning systems.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	325	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-peak	15	A
I_B	Base Current-Continuous	3.0	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	75	W
T_j	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	2.3	$^\circ\text{C/W}$



DIM	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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.

Silicon NPN Power Transistors**BUY70B****ELECTRICAL CHARACTERISTICS** **$T_C=25^{\circ}\text{C}$ unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$; $I_B=0$	325			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}$; $I_E=0$	800			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\text{mA}$; $I_C=0$	8			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}$; $I_B=0.8\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}$; $I_B=0.8\text{A}$			1.5	V
I_{CEX}	Collector Cutoff Current	$V_{CE}=800\text{V}$; $V_{BE}=-2\text{V}$			1.0	mA
h_{FE}	DC Current Gain	$I_C=1\text{A}$; $V_{CE}=10\text{V}$	15			
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}$; $V_{CE}=10\text{V}$		6		MHz
C_{OB}	Collector Output Capacitance	$I_E=0$; $V_{CB}=20\text{V}$			150	pF
t_f	Fall Time	$I_C=4\text{A}$; $I_{B1}=-I_{B2}=0.8\text{A}$; $V_{CC}=40\text{V}$			1.0	μs