

**Silicon PNP Power Transistor**

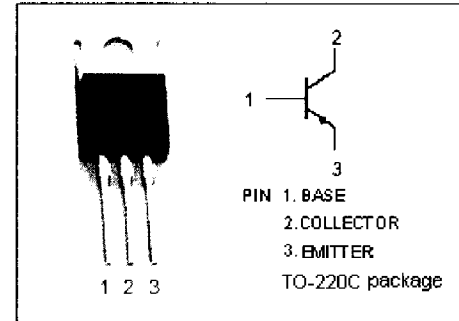
**BDY83**

**DESCRIPTION**

- Continuous Collector Current  $I_C = -4A$
- Collector Power Dissipation-  
 :  $P_C = 36W @ T_C = 25^\circ C$
- Complement to Type BDY81

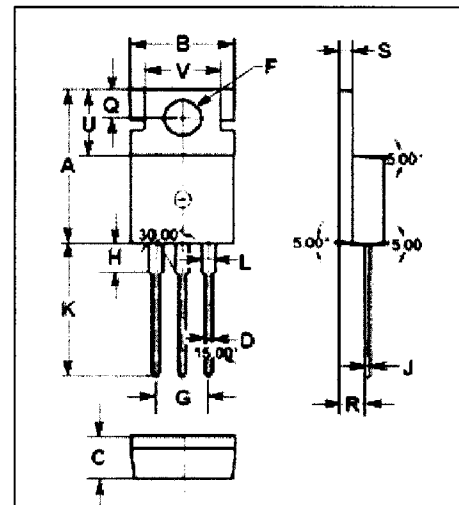
**APPLICATIONS**

- Designed for general purpose switching and amplifier applications.



**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEX}$	Collector-Emitter Voltage $V_{BE} = +1.5V$	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-10	V
$I_C$	Collector Current-Continuous	-4	A
$I_B$	Base Current-Continuous	-2	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	36	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~175	$^\circ C$

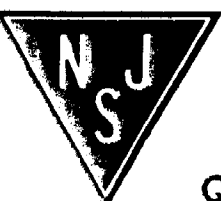


DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	3.5	$^\circ C/W$

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 PNP Power Transistor

# BDY83

## 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	$I_C = -100\text{mA}; I_B = 0$	-50			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -10\text{mA}; I_E = 0$	-50			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\text{mA}; I_C = 0$	-10			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}; I_B = -0.3\text{A}$			-1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$			-0.9	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -20\text{V}; I_B = 0$			-10	mA
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -20\text{V}; I_E = 0$			-0.2	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-0.1	mA
$h_{FE-1}$	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$	40		240	
$h_{FE-2}$	DC Current Gain	$I_C = -2.5\text{A}; V_{CE} = -5\text{V}$	10			
$f_T$	Current Gain-Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -10\text{V}$		3		MHz

### ◆ $h_{FE-1}$ Classifications

A	B	C
40-80	70-140	120-240