

Silicon PNP Power Transistor

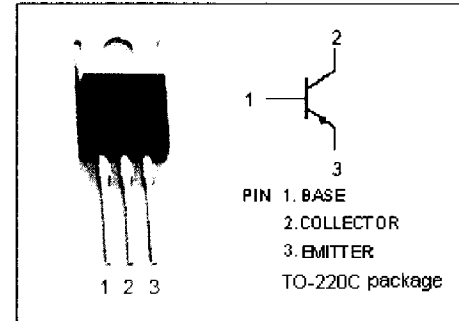
BDY83

DESCRIPTION

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

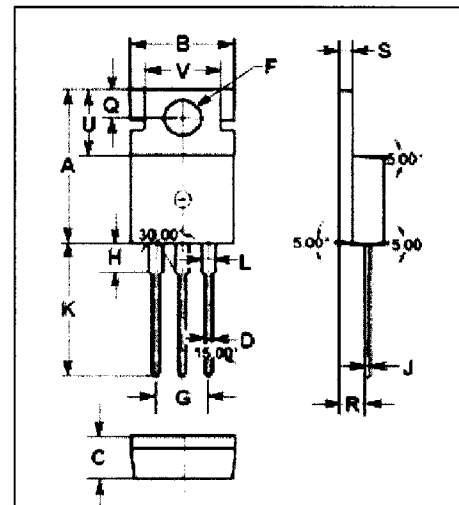
APPLICATIONS

- 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	$^\circ C/W$

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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