

isc Silicon PNP Power Transistors

BD500/B

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -50V(\text{Min})$
-80V(Min)
- High Power Dissipation

APPLICATIONS

- Designed for use in high power audio amplifiers utilizing complementary or quasi complementary circuits.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

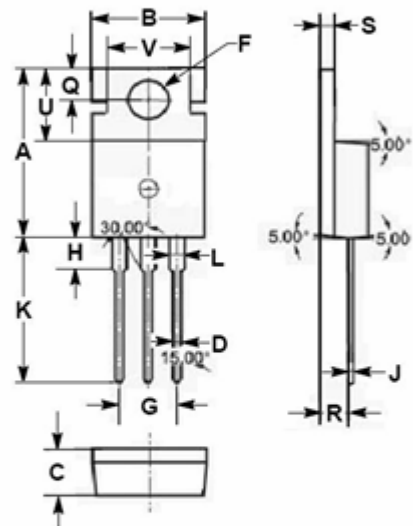
SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD500	-55	V
		BD500B	-85	
V_{CEO}	Collector-Emitter Voltage	BD500	-50	V
		BD500B	-80	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-10	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$		75	W
T_J	Junction Temperature		150	$^{\circ}C$
T_{stg}	Storage Temperature Range		-55~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.39	°C/W



PIN 1. BASE
2. COLLECTOR
3. EMITTER
TO-220C package



	mm	
DIM	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

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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	BD500	I _C = -30mA ;I _B = 0	-50			V
		BD500B		-80			
V _{CE(sat)}	Collector-Emitter Saturation Voltage	BD500	I _C = -5A; I _B = -0.5A			-1.0	V
		BD500B	I _C = -3.5A; I _B = -0.35A				
V _{BE(on)}	Base-Emitter On Voltage	BD500	I _C = -5A; V _{CE} = -4V			-1.6	V
		BD500B	I _C = -3.5A; V _{CE} = -4V				
I _{CBO}	Collector Cutoff Current		V _{CB} = -55V;I _E = 0			-1.0	mA
			V _{CB} = -85V;I _E = 0				
I _{EBO}	Emitter Cutoff Current		V _{EB} = -5V; I _C = 0			-1.0	mA
h _{FE}	DC Current Gain	BD500	I _C = -5A; V _{CE} = -4V	15		90	
		BD500B	I _C = -3.5A; V _{CE} = -4V				
f _T	Current-Gain—Bandwidth Product		I _C = -1.0A ; V _{CE} = -10V		8		MHz