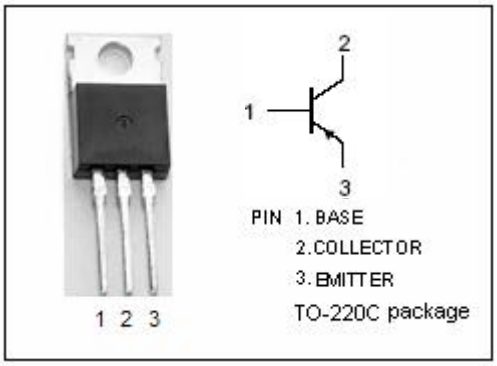
isc Silicon PNP Power Transistor — BDS18



DESCRIPTION

- Low Collector Saturation Voltage
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Developed for power liner and switching

-Gener purpose power

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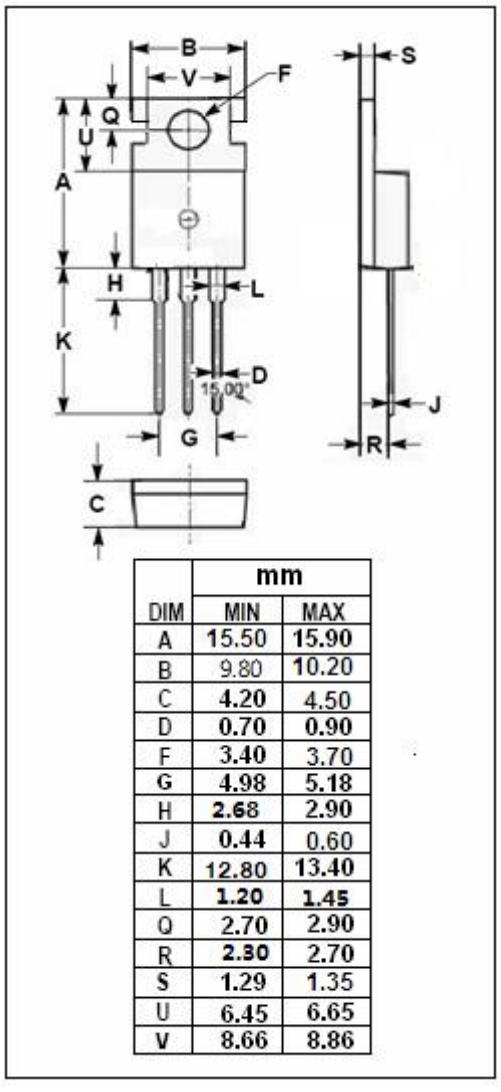

DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current-Continuous	-8.0	A
I_B	Base Current-Continuous	-2	A
Pc	Collector Power Dissipation @ T_C<75℃	50	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= -50mA;Ib=0	-120		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -0.5A; I_B= -0.05A		-0.4	V
$V_{BE(on)}$	Base - Emitter voltage	Ic= –0.5A ;Vce= –2V		-1.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -120V ; I_E=0		-20	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= -60V ; I_B=0		0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C=0		-10	μA
h_{FE}	DC Current Gain	I_C= -4A ; V_{CE}= -2V	40	250	
fT	Transition frequency	Ic= –0.5A Vce= –4V F = 20MHz	30		MHZ
Switching times					
t_{on}	Turn-on Time	I_C= -2.0A , I_{B1}= -I_{B2}= -0.2A,V_{CC}≈-80V		0.5	μs
t_{stg}	Storage Time			1.5	μs
t_f	Fall Time			0.3	μs

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