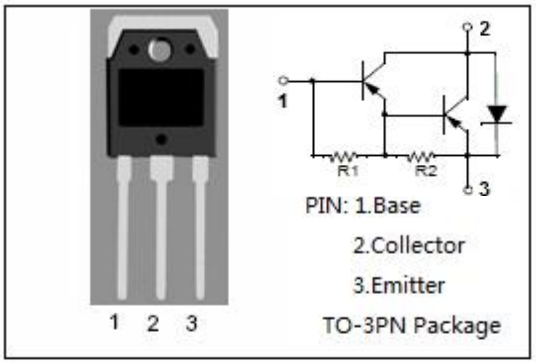
isc Silicon PNP Darlington Power Transistor 2SB1420

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= -120V(Min)
- High DC Current Gain-
  : h_{FE}= 2000(Min)@I_C= -8A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

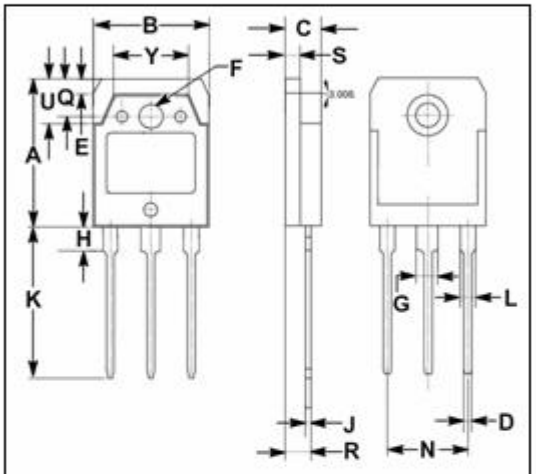


APPLICATIONS

- Driver for chopper regulator, DC motor driver and general purpose applications.

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	-6	V
I_C	Collector Current-Continuous	-16	A
I_{CP}	Collector Current-Pulse	-26	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @ T_C=25℃	80	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -10mA; I_B= 0	-120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -8A; I_B= -16mA			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -8A; I_B= -16mA			-2.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -120V; I_E=0			-10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -6V; I_C=0			-10	mA
h_{FE}	DC Current Gain	I_C= -8A; V_{CE}= -4V	2000			
C_{OB}	Output Capacitance	I_E=0; V_{CB}= -10V; f_{test}= 1.0MHz		350		pF
f_T	Current-Gain—Bandwidth Product	I_E= 1A; V_{CE}= -12V		50		MHz
Switching Times						
t_{on}	Turn-on Time	I_C= -12A; I_{B1}= -I_{B2}= -24mA, V_{CC}= -24V, R_L= 2Ω		1.0		μs
t_{stg}	Storage Time			3.0		μs
t_f	Fall Time			1.0		μs

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