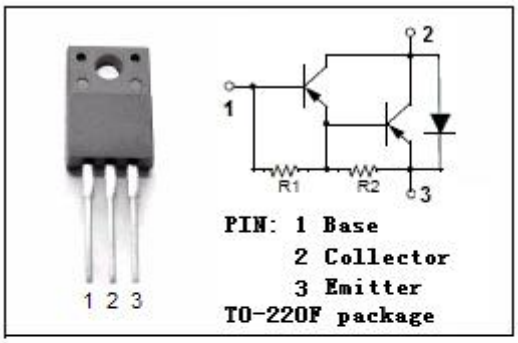
isc Silicon PNP Darlington Power Transistor 2SB1283

DESCRIPTION

- High DC Current Gain-
  : h_{FE}= 1500(Min.)@I_C= -3A
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= -1.5V(Max)@I_C= -3A
- Good Linearity of h_{FE}
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

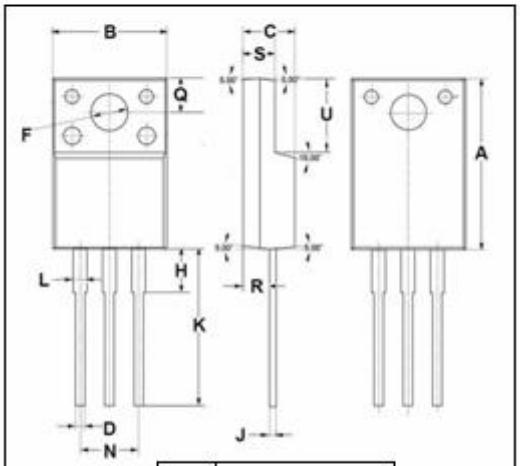


APPLICATIONS

- High power switching applications.
- Hammer drive, pulse motor drive applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-7	A
I_{CM}	Collector Current-Peak	-10	A
I_B	Base Current-Continuous	-0.5	A
I_{BM}	Base Current-peak	-1	A
P_C	Collector Power Dissipation @ T_C=25℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

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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= -30mA; I_B= 0	-100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -3A; I_B= -5mA			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -3A; I_B= -5mA			-2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -100V; I_E= 0			-100	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= -100V; R_{BE}= ∞			-100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -7V; I_C= 0			-5.0	mA
h_{FE}	DC Current Gain	I_C= -3A; V_{CE}= -3V	1500		15000	
f_T	Current-Gain—Bandwidth Product	I_C= -0.7A; V_{CE}= -10V		20		MHz
Switching Times						
t_{on}	Turn-on Time	I_C= -3.0A ,I_{B1}= -I_{B2}= -5mA, V_{CC}≈ -40V; R_L= 10Ω			1.0	μs
t_{stg}	Storage Time				4.0	μs
t_f	Fall Time				2.0	μs