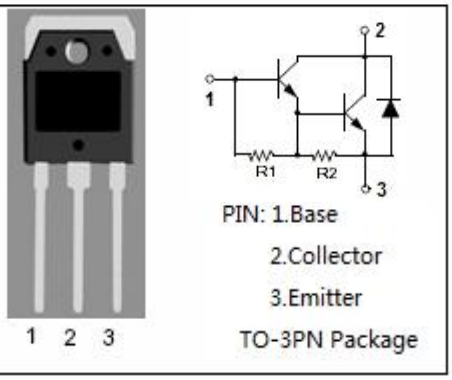
isc Silicon NPN Darlington Power Transistor 2SD1230

DESCRIPTION

- High DC Current Gain
  : h_{FE}= 1500(Min.)@ I_C= 4A, V_{CE}= 3V
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 100V(Min.)
- Complement to Type 2SB913
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

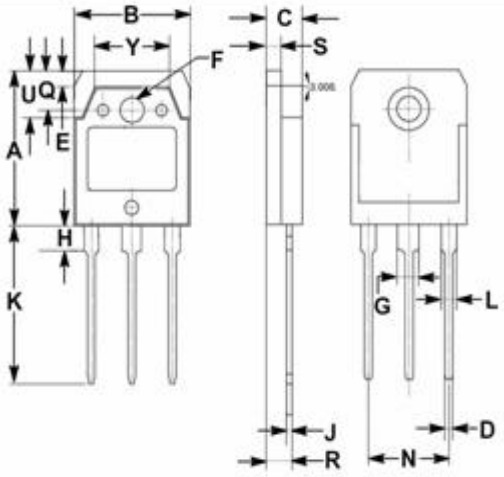


APPLICATIONS

- Designed for motor drivers, printer hammer drivers, relay drivers, voltage regulator control applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	110	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	12	A
P_C	Collector Power Dissipation @T_a=25℃	2.5	W
	Collector Power Dissipation @T_C=25℃	60	
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= 30mA; R_{BE}= ∞	100			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	110			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 4A, I_B= 8mA			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 4A, I_B= 8mA			2.0	V
I_{CBO}	Collector Cutoff current	V_{CB}= 80V, I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			3.0	mA
f_T	Current-Gain—Bandwidth Product	I_C= 4A; V_{CE}= 5V		20		MHz
h_{FE}	DC Current Gain	I_C= 4A; V_{CE}= 3V	1500			
Switching Times						
t_{on}	Turn-On Time	I_C = 4A, I_{B1} = I_{B2}= 8mA; R_L= 12.5Ω ; V_{CC}= 50V		0.6		μs
t_{stg}	Storage Time			4.8		μs
t_f	Fall Time			1.6		μs

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