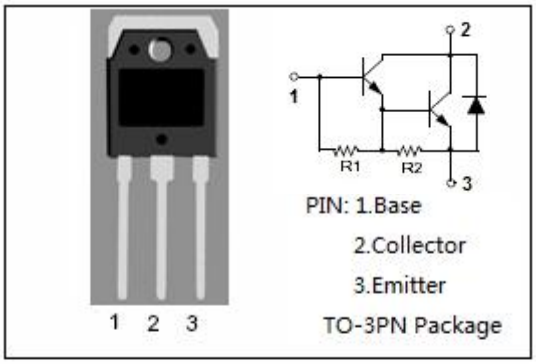
isc Silicon NPN Darlington Power Transistor 2SD1514



DESCRIPTION

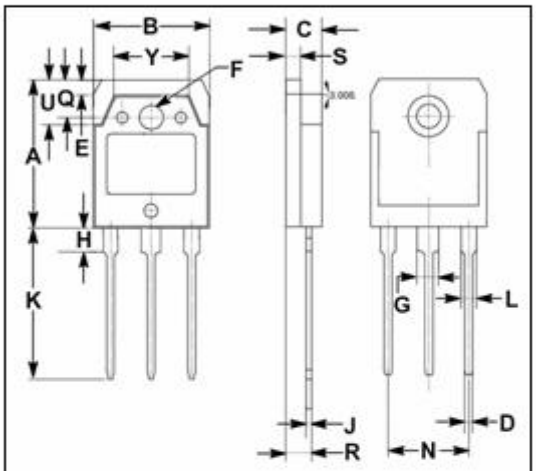
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 100V(Min)
- High DC Current Gain
  : h_{FE}= 1000(Min) @ I_C= 10A, V_{CE}= 3V
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power amplifier and high current switching 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	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current- Continuous	3	A
P_C	Collector Power Dissipation @T_C=25℃	100	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, R_{BE}= ∞	100			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 5mA ,I_C= 0	7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 6A , I_B= 10mA			2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 12A , I_B= 20mA			2.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 6A , I_B= 10mA			2.5	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 12A , I_B= 20mA			3.0	V
I_{CBO}	Collector Cutoff current	V_{CB}= 100V, I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			5	mA
h_{FE-1}	DC Current Gain	I_C= 5A ; V_{CE}= 3V	1000		20000	
h_{FE-2}	DC Current Gain	I_C= 10A ; V_{CE}= 3V	1000			
Switching Times						
t_{on}	Turn-on Time	I_C = 6A,I_{B1} = I_{B2}= 10mA			2.0	μs
t_{stg}	Storage Time				10	μs
t_f	Fall Time				7.0	μs