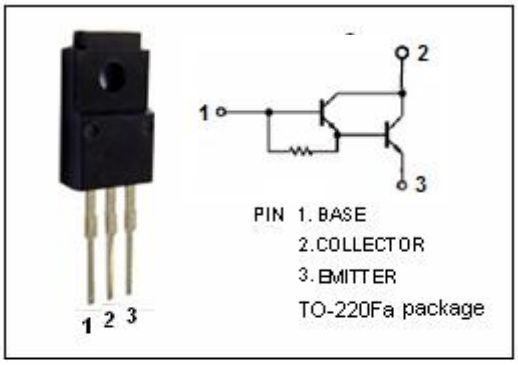
isc Silicon NPN Darlington Power Transistor 2SD1410

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 250V(Min)
- Collector-Emitter Saturation Voltage-
  :$V_{CE(sat)}$= 2.0V(Max) @I_C= 4A
- High DC Current Gain
  : h_{FE}= 2000(Min) @ I_C= 2A, V_{CE}= 2V
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

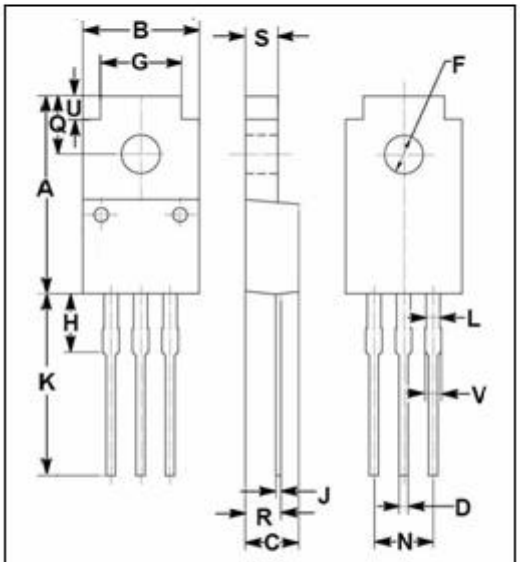


APPLICATIONS

- Igniter applications
- High voltage switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ T_a=25℃	2.0	W
	Collector Power Dissipation @ T_C=25℃	30	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	16.85	17.15
B	9.54	10.10
C	4.35	4.65
D	0.75	0.90
F	3.20	3.40
G	6.90	7.20
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.55	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA ; L= 40mH	250			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 40mA			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 40mA			2.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 300V; I_E= 0			500	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0			500	μA
$h_{FE\ -1}$	DC Current Gain	I_C= 2A ; V_{CE}= 2V	2000			
$h_{FE\ -2}$	DC Current Gain	I_C= 4A ; V_{CE}= 2V	200			
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V; f_{test}=1MHz		35		pF
Switching times						
t_{on}	Turn-on Time	I_C= 4A , I_{B1}= I_{B2}= 40mA R_L= 25Ω ; V_{CC}= 100V		1.0		μs
t_{stg}	Storage Time			8.0		μs
t_f	Fall Time			5.0		μs

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