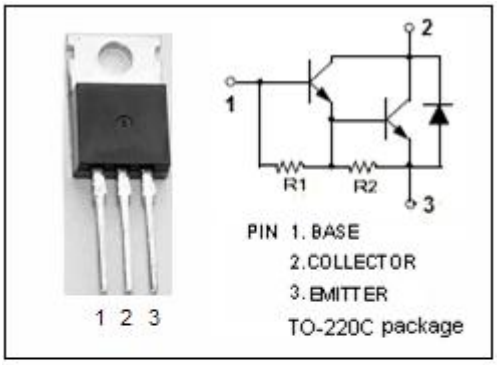
isc Silicon NPN Darlington Power Transistor — 2SD971



DESCRIPTION

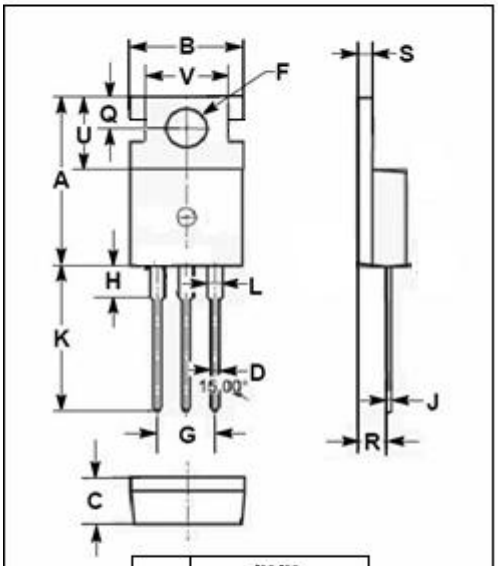
- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 300V(Min)
- High DC Current Gain
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for applications such as electronic ignition, DC and AC motor controls, solenoid drivers,etc.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_{CP}	Collector Current-Peak	10	A
I_B	Base Current	1	A
P_C	Collector Power Dissipation @T_C=25℃	50	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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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= 30mA ;I_B= 0	300			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 2.5A; I_B= 50mA			1.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B=100mA			1.8	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 2.5A; I_B= 50mA			2.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 100mA			2.5	V
I_{CES}	Collector Cutoff Current	V_{CE}= 300V; V_{BE}= 0 V_{CE}= 300V; V_{BE}= 0,T_C= 125℃			1 5	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 300V; I_B= 0			1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			5	mA
h_{FE}	DC Current Gain	I_C= 2A ; V_{CE}= 2V	2000			
V_{ECF}	C-E Diode Forward Voltage	I_F= 4A			2.5	V