

isc Silicon NPN Darlington Power Transistor

2SD971

DESCRIPTION

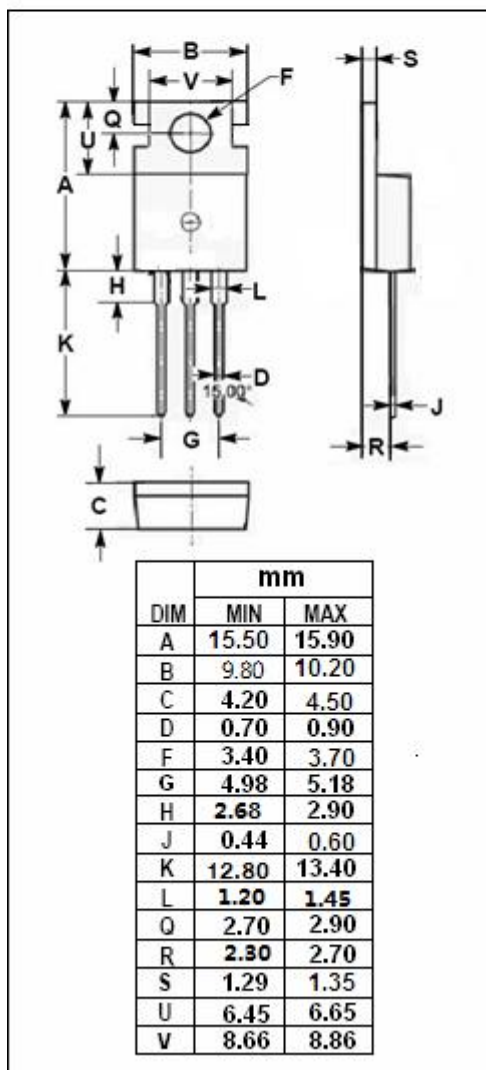
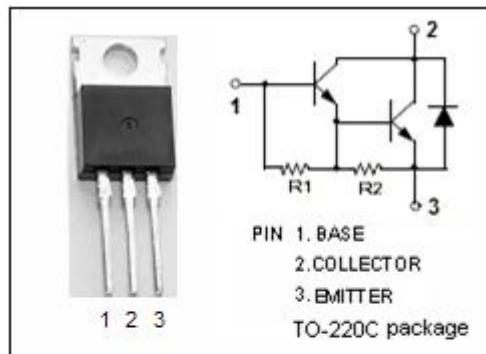
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 300V(\text{Min})$
- High DC Current Gain
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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 @ $T_C=25^\circ\text{C}$	50	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD971****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(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°C			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

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