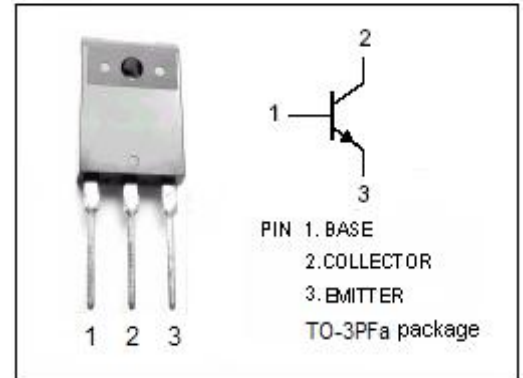


**isc Silicon NPN Power Transistor**
**2SD1850**
**DESCRIPTION**

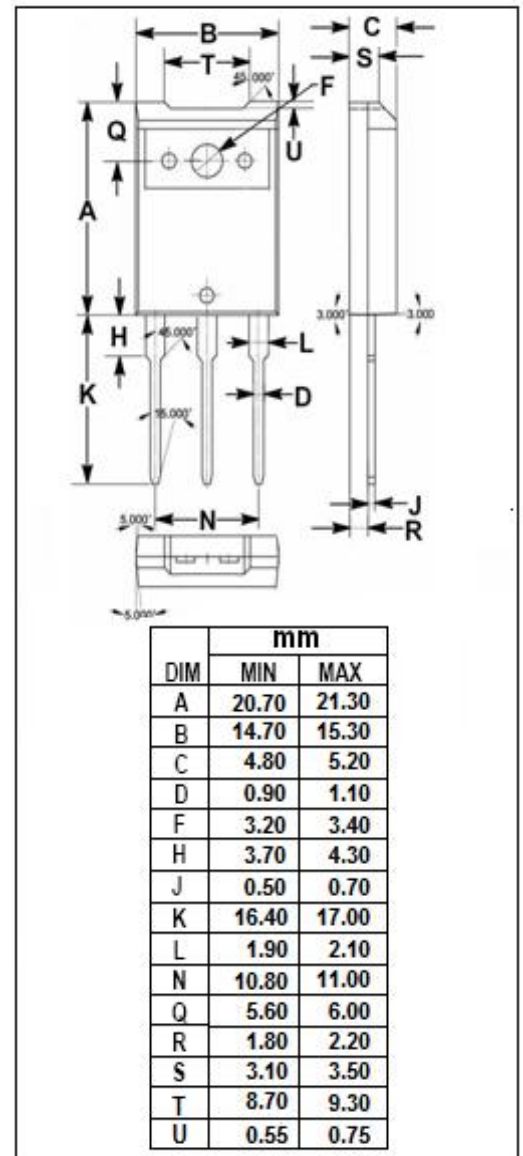
- High Voltage
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for horizontal deflection output applications.


**ABSOLUTE MAXIMUM RATINGS (Ta=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	1300	V
V <sub>CES</sub>	Collector-Emitter Voltage	1300	V
V <sub>CEO</sub>	Collector-Emitter Voltage	700	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current-Continuous	7	A
I <sub>CP</sub>	Collector Current-Peak	20	A
I <sub>B</sub>	Base Current- Continuous	3	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>a</sub> =25°C	3	W
	Collector Power Dissipation @T <sub>c</sub> =25°C	120	
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55-150	°C



## isc Silicon NPN Power Transistor

2SD1850

## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 1mA; I <sub>C</sub> = 0	7			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A			8.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A			1.5	V
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 5V	5		25	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 6A; V <sub>CE</sub> = 5V	4.5			
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1000V; I <sub>E</sub> = 0			10	μA
		V <sub>CB</sub> = 1300V; I <sub>E</sub> = 0			1.0	mA
f <sub>T</sub>	Transition Frequency	I <sub>C</sub> = 1A; V <sub>CE</sub> = 10V		2		MHz
Switching Times, Resistive Load						
t <sub>s</sub>	Storage Time	I <sub>C</sub> = 6A; I <sub>B1</sub> = 1.5A; I <sub>B2</sub> = 3A, V <sub>CC</sub> = 200V		1.5		μs
t <sub>f</sub>	Fall Time			0.2		μs

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