

## isc Silicon NPN Power Transistor

2SD800

## DESCRIPTION

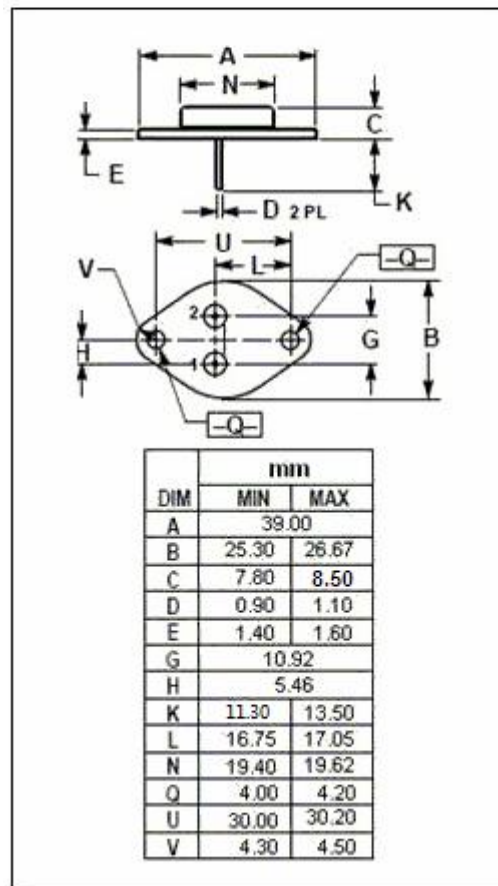
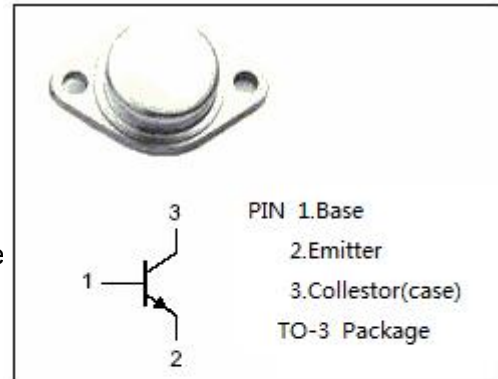
- High Breakdown Voltage-  
:  $V_{CBO} = 750V$  (Min)
- High Switching Speed
- Low collector saturation voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

## APPLICATIONS

- Designed for use in converters, inverters, switching regulators, motor control systems etc

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	750	V
$V_{CEO}$	Collector-Emitter Voltage	450	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	4	A
$I_{CM}$	Collector Current-Peak	6	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	30	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55-150	$^\circ C$



**isc Silicon NPN Power Transistor****2SD800****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	6			V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA; I <sub>B</sub> = 0	450			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3.5A; I <sub>B</sub> = 1A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 3.5A; I <sub>B</sub> = 1A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =750V; I <sub>B</sub> = 0			0.5	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> =0			100	uA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V	15		60	
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1.0MHz		85		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V		8		MHz

**Switching times**

t <sub>stg</sub>	Storage Time	I <sub>C</sub> = 3.5A , I <sub>B1</sub> = I <sub>B2</sub> = 1A,		1.2		μ s
t <sub>f</sub>	Fall Time			0.15		μ s

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