

# isc Silicon NPN Darlington Power Transistor

## 2SD803

### DESCRIPTION

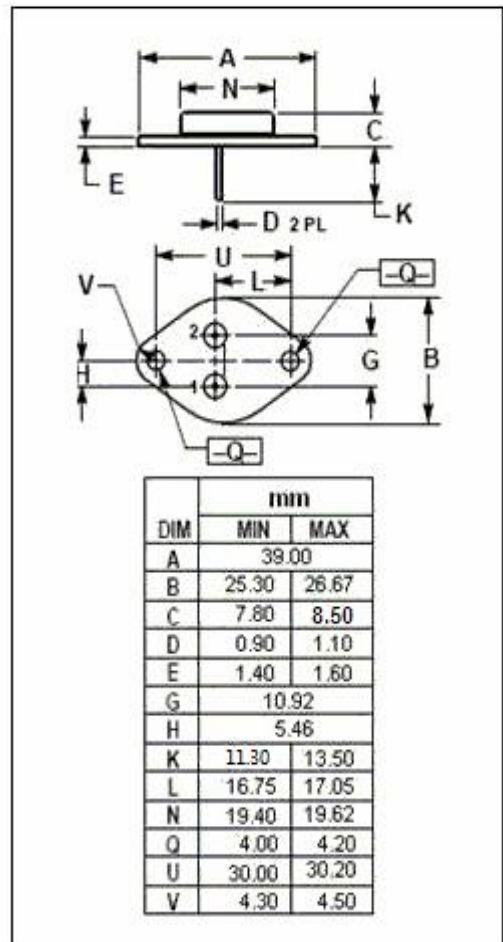
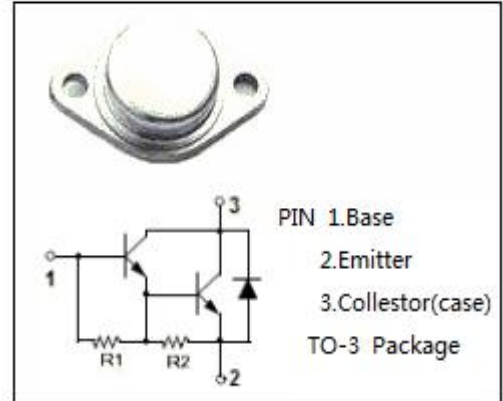
- Built-in Base-Emitter Shunt Resistors
- High DC current gain-  
 $h_{FE} = 2000$  (Min) @  $I_C = 1$  Adc
- Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = 100V$ (Min)
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for high power amplifier applications.

### ABSOLUTE MAXIMUM RATINGS( $T_C=25^{\circ}C$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current -Continuous	8	A
$I_B$	Base Current -Continuous	1	A
$P_C$	Collector Power Dissipation@ $T_C=25^{\circ}C$	100	W
$T_j$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature	-65~150	$^{\circ}C$



**isc Silicon NPN Darlington Power Transistor****2SD803****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 30mA ; I <sub>B</sub> = 0	100		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3A; I <sub>B</sub> = 30mA		1.5	V
I <sub>CBO</sub>	Collector Cutoff current	V <sub>CB</sub> = 120V; I <sub>E</sub> =0		100	μ A
I <sub>EBO</sub>	Emitter Cut-off current	V <sub>EB</sub> = 6V; I <sub>C</sub> = 0		10	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 4V	2000		
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 40A ; V <sub>CE</sub> = 4V	7		

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