



**D1803** TRANSISTOR (NPN)

TO-251

**FEATURES**

- Power dissipation

**MAXIMUM RATINGS (Ta=25°C unless otherwise noted)**

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	50	V
V <sub>CE0</sub>	Collector-Emitter Voltage	50	V
V <sub>EB0</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current -Continuous	4	A
P <sub>C</sub>	Collector Power Dissipation	1.25	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

3 EMITTER

2 COLLECTOR

1 BASE



**ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR) <sub>CB0</sub>	I <sub>C</sub> = 100μA, I <sub>E</sub> =0	50			V
Collector-emitter breakdown voltage	V(BR) <sub>CE0</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> =0	40			V
Emitter-base breakdown voltage	V(BR) <sub>EB0</sub>	I <sub>E</sub> = 100μA, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 40 V, I <sub>E</sub> =0			1	μA
Collector cut-off current	I <sub>CE0</sub>	V <sub>CE</sub> = 30 V, I <sub>B</sub> =0			10	μA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 6 V, I <sub>C</sub> =0			1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 2 V, I <sub>C</sub> = 1A	60		400	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A			0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A			1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> =0.1A f =10MHz		90		MHz

**CLASSIFICATION OF h<sub>FE</sub>**

Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

# Typical Characteristics

