

**isc Silicon NPN Power Transistor**
**BDX41**
**DESCRIPTION**

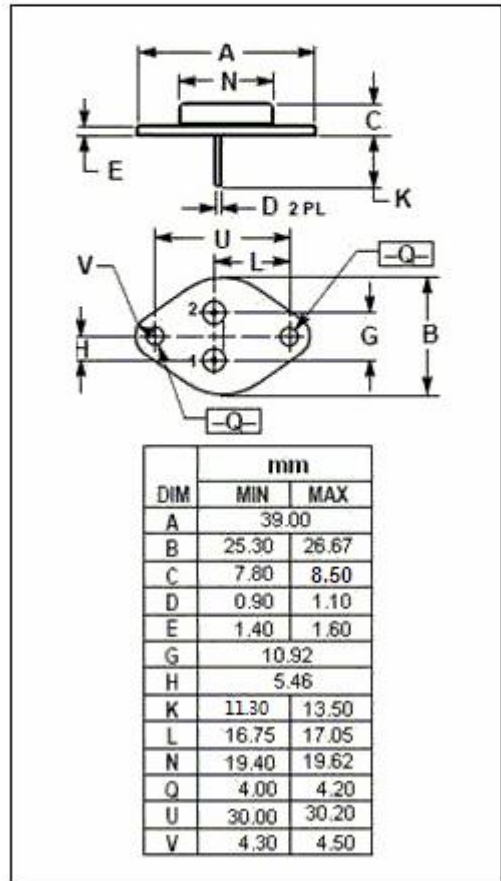
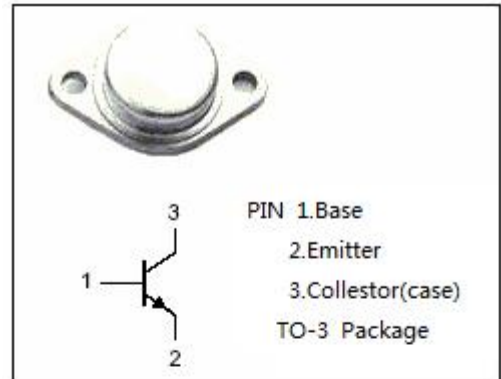
- With TO-3 Package
- High Current Capability
- Wide area of safe operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for general-purpose power amplifier and switching applications.

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	40	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current-Continuous	16	A
I <sub>CM</sub>	Collector Current-Peak	20	A
I <sub>B</sub>	Base Current-Continuous	5	A
P <sub>C</sub>	Collector Power Dissipation	150	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



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**ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> =5A; I <sub>B</sub> = 0.5A			1.0	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 1A			2.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> =5A; I <sub>B</sub> = 0.5A			1.5	V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 30mA; I <sub>B</sub> = 0	40			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 1mA; I <sub>C</sub> = 0	6			V
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> =1A; V <sub>CE</sub> = 5V	60		200	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> =15A; V <sub>CE</sub> = 5V	15		60	
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =50V ; I <sub>E</sub> = 0			100	uA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> =6V; I <sub>C</sub> = 0			100	uA
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 10V; f <sub>test</sub> = 1.0MHz	3			MHz

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