

# isc Silicon NPN Power Transistor

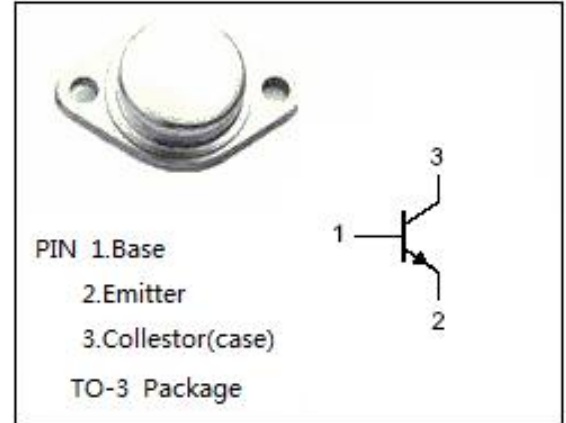
# 3DD9H

### DESCRIPTION

- With TO-3 packaging
- Large collector current
- Low collector saturation voltage
- High power dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

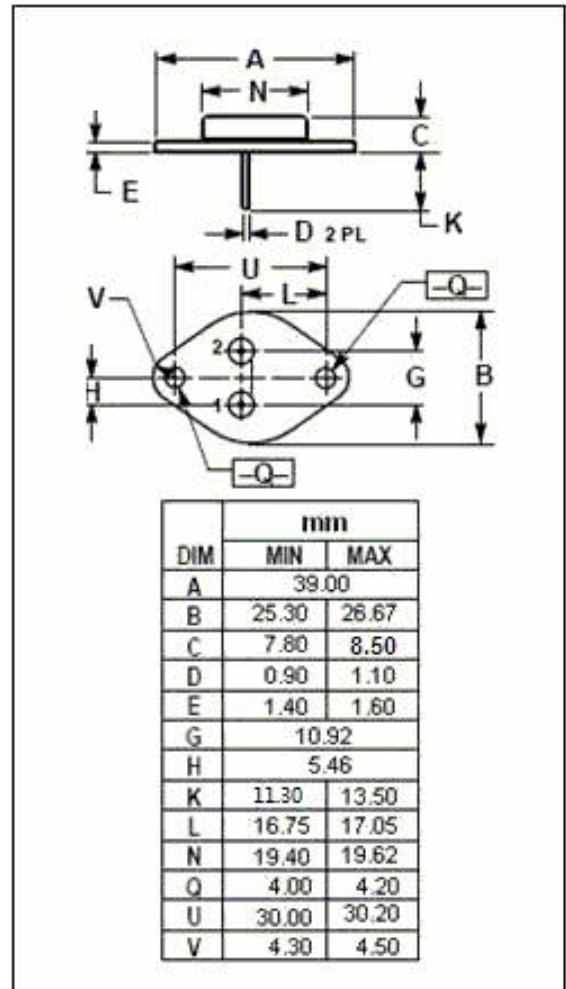
### APPLICATIONS

- Designed for use in DC-DC converter
- Driver of solenoid or motor
- For audio amplifier applications



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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CB0</sub>	Collector-Base Voltage	500	V
V <sub>CEO</sub>	Collector-Emitter Voltage	500	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current-Continuous	7.5	A
P <sub>D</sub>	Total Power Dissipation@T <sub>c</sub> =75°C	150	W
T <sub>J</sub>	Max.Junction Temperature	175	°C
T <sub>stg</sub>	Storage Temperature	-55~175	°C



### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>thj-c</sub>	Thermal Resistance,Junction to Case	0.66	°C/W

**isc Silicon NPN Power Transistor**
**3DD9H**
**ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV <sub>CBO</sub>	Collector-Base Sustaining Voltage	I <sub>C</sub> = 10mA; I <sub>E</sub> = 0	500		V
BV <sub>CEO</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 5mA; I <sub>B</sub> = 0	500		V
BV <sub>EBO</sub>	Emitter-Base Sustaining Voltage	I <sub>E</sub> = 10mA; I <sub>C</sub> =0	5		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.8A		2.0	V
V <sub>BE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 7.5A; I <sub>B</sub> = 0.75A		1.8	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> =100V; I <sub>E</sub> = 0		2.0	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 3.5A; V <sub>CE</sub> = 10V	7	120	

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