

**isc Silicon NPN Power Transistor**

**3DF1D**

**DESCRIPTION**

- With TO-66 packaging
- Large collector current
- Low collector saturation voltage
- High power dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

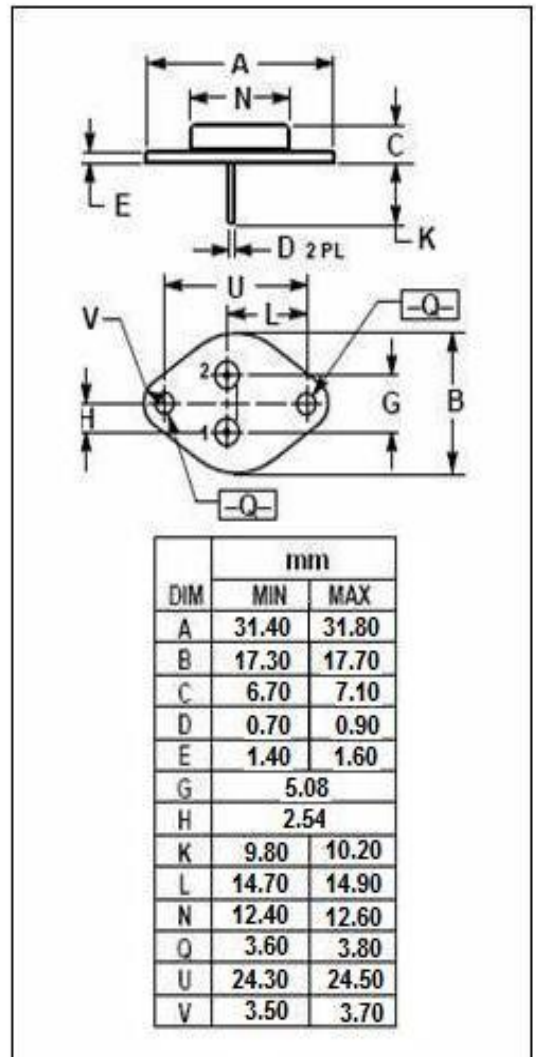
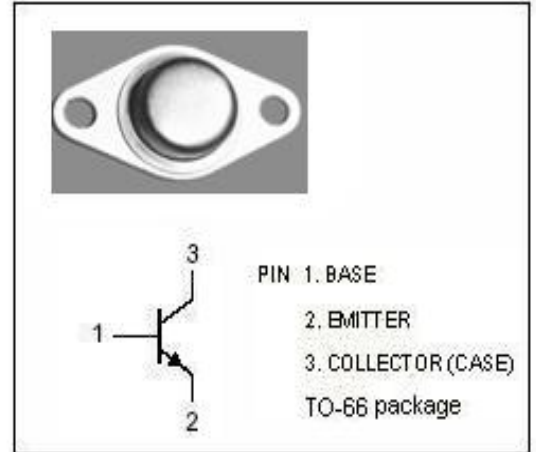
- Designed for use in DC-DC converter
- Driver of solenoid or motor

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	250	V
V <sub>CEO</sub>	Collector-Emitter Voltage	200	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>c</sub>	Collector Current-Continuous	1.5	A
P <sub>D</sub>	Total Power Dissipation@T <sub>C</sub> =75°C	10	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>th j-c</sub>	Thermal Resistance,Junction to Case	10	°C/W



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**ELECTRICAL CHARACTERISTICS**
 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$BV_{CBO}$	Collector-Base Sustaining Voltage	$I_C=1\text{mA}; I_E=0$	250		V
$BV_{CEO}$	Collector-Emitter Sustaining Voltage	$I_C=1\text{mA}; I_B=0$	200		V
$BV_{EBO}$	Emitter-Base Sustaining Voltage	$I_E=0.5\text{mA}; I_C=0$	6		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.75\text{A}; I_B=0.075\text{A}$		0.8	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=100\text{V}; I_B=0$		0.2	mA
$h_{FE}$	DC Current Gain	$I_C=0.75\text{A}; V_{CE}=10\text{V}$	15		

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