

**isc Silicon NPN Power Transistor**
**3DF5B**
**DESCRIPTION**

- With TO-3 packaging
- Excellent Safe Operating Area
- DC Current Gain-  
:  $h_{FE}=15(\text{Min})@I_C = 2.5A$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(\text{sat})}= 1.0V(\text{Max})@ I_C = 2.5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

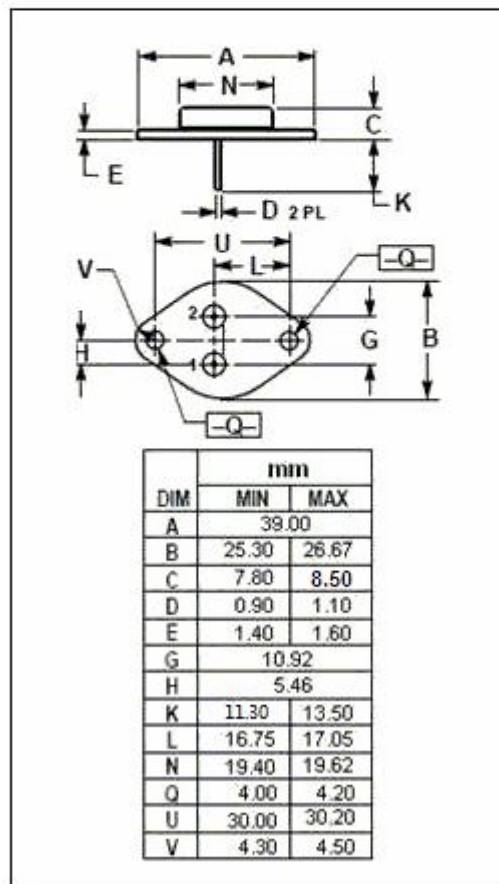
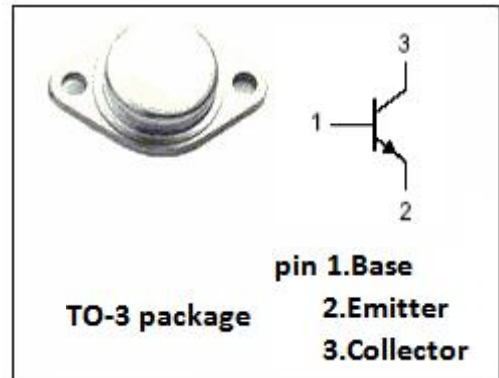
- Designed for use in DC-DC converter
- Driver of solenoid or motor

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	6.0	V
$I_C$	Collector Current-Continuous	5.0	A
$P_D$	Total Power Dissipation@ $T_C=75^\circ\text{C}$	50	W
$T_J$	Max.Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	2.0	$^\circ\text{C}/\text{W}$



**isc Silicon NPN Power Transistor****3DF5B****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$BV_{CBO}$	Collector-Base Sustaining Voltage	$I_C= 3.0\text{mA}; I_E= 0$	150		V
$BV_{CEO}$	Collector-Emitter Sustaining Voltage	$I_C= 3.0\text{mA}; I_B= 0$	100		V
$BV_{EBO}$	Emitter-Base Sustaining Voltage	$I_E= 1.0\text{mA}; I_C= 0$	6.0		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 2.5\text{A}; I_B= 0.25\text{A}$		1.0	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}= 50\text{V}; I_B= 0$		0.8	mA
$h_{FE}$	DC Current Gain	$I_C= 2.5\text{A}; V_{CE}= 10\text{V}$	15		

**NOTICE:**

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