

isc Silicon NPN Power Transistor

3DD159F

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

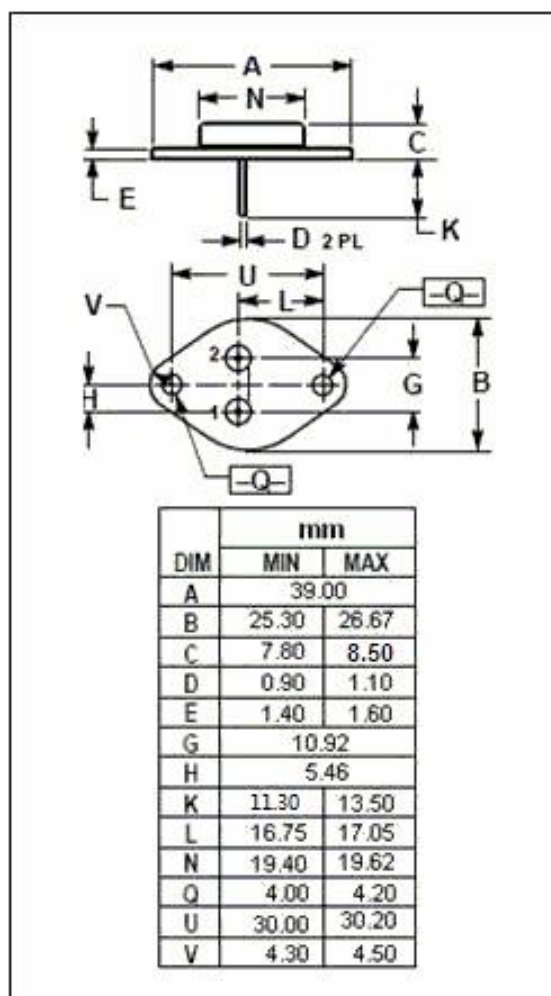
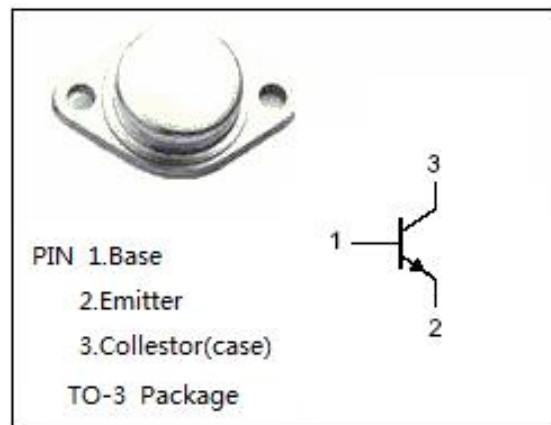
- Designed for use in DC-DC converter
- Driver of solenoid or motor

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
P_D	Total Power Dissipation@ $T_C=75^{\circ}\text{C}$	50	W
T_J	Max.Junction Temperature	175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~175	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

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



isc Silicon NPN Power Transistor**3DD159F****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV _{CBO}	Collector-Base Sustaining Voltage	I _C = 3mA; I _E = 0	400		V
BV _{CEO}	Collector-Emitter Sustaining Voltage	I _C = 3mA; I _B = 0	300		V
BV _{EBO}	Emitter-Base Sustaining Voltage	I _E = 1mA; I _C = 0	5		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2.5A; I _B = 0.25A		1.2	V
V _{BE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2.5A; I _B = 0.25A		1.5	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 100V; I _E = 0		1	mA
h _{FE}	DC Current Gain	I _C = 2.5A; V _{CE} = 5V	15	120	

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