

isc Silicon NPN Power Transistor
3DF20D
DESCRIPTION

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

APPLICATIONS

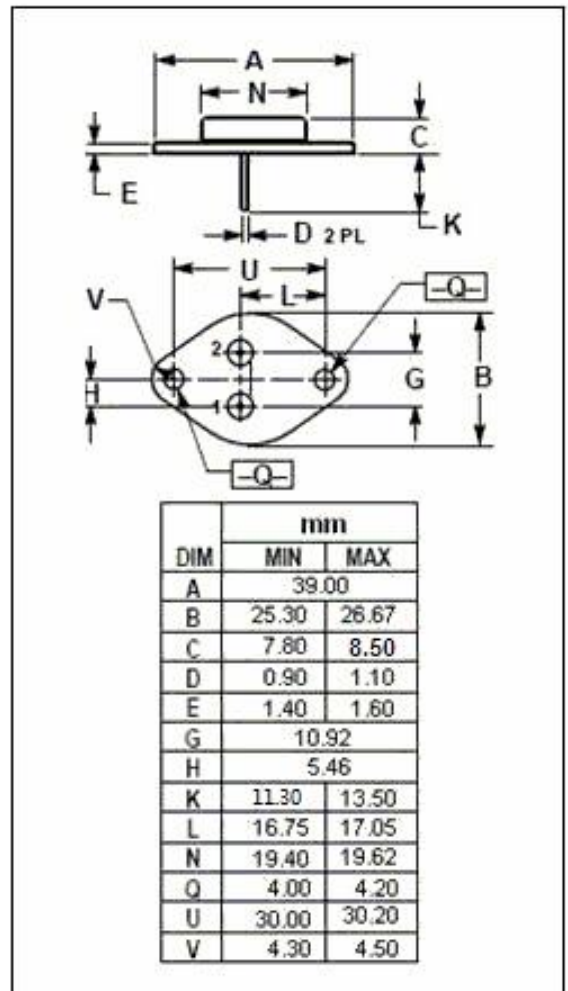
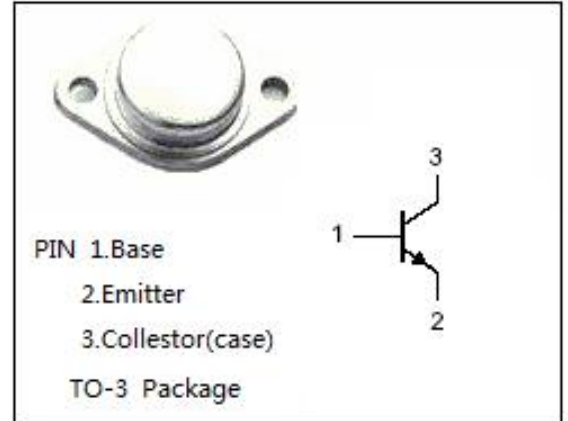
- Designed for use in DC-DC converter
- Driver of solenoid or motor

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CB0}	Collector-Base Voltage	250	V
V _{CEO}	Collector-Emitter Voltage	200	V
V _{EBO}	Emitter-Base Voltage	6	V
I _c	Collector Current-Continuous	20	A
P _D	Total Power Dissipation@T _c =75°C	200	W
T _J	Max.Junction Temperature	175	°C
T _{stg}	Storage Temperature	-55~175	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance,Junction to Case	0.75	°C/W



isc Silicon NPN Power Transistor**3DF20D****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C= 5\text{mA}; I_E= 0$	250		V
BV_{CEO}	Collector-Emitter Sustaining Voltage	$I_C= 5\text{mA}; I_B= 0$	200		V
BV_{EBO}	Emitter-Base Sustaining Voltage	$I_E= 7\text{mA}; I_C= 0$	6		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 10\text{A}; I_B= 1\text{A}$		1.8	V
I_{CEO}	Collector Cutoff Current	$V_{CE}= 100\text{V}; I_B= 0$		1	mA
h_{FE}	DC Current Gain	$I_C= 10\text{A}; V_{CE}= 10\text{V}$	15		

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