

isc Silicon NPN Power Transistor

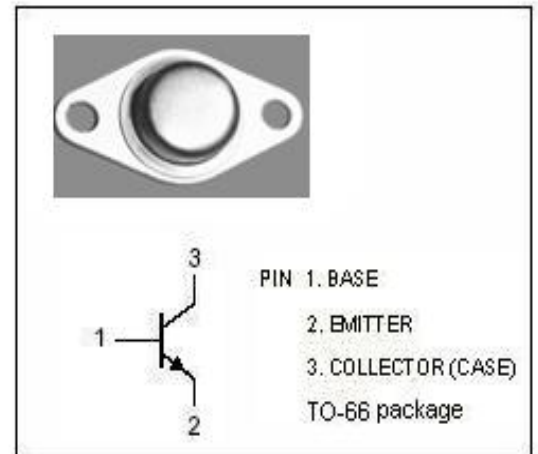
3DD100E

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

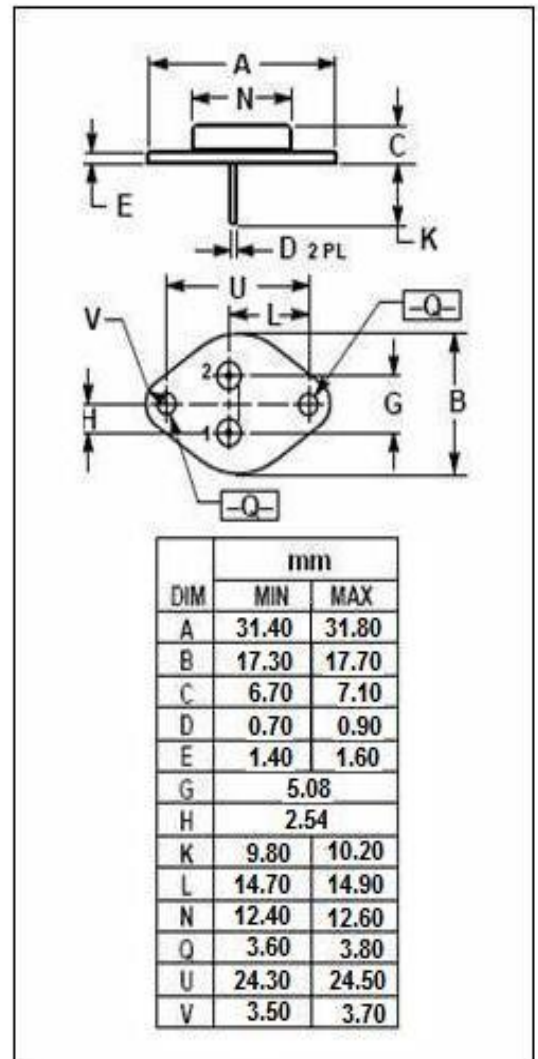
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CB0}	Collector-Base Voltage	350	V
V _{CEO}	Collector-Emitter Voltage	300	V
V _{EB0}	Emitter-Base Voltage	4	V
I _c	Collector Current-Continuous	1.5	A
P _D	Total Power Dissipation@T _c =75°C	20	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	5.0	°C/W

isc Silicon NPN Power Transistor**3DD100E****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{CEO}	Collector-Emitter Sustaining Voltage	$I_C=1\text{mA}; I_B=0$	300		V
BV_{CBO}	Collector-Base Sustaining Voltage	$I_C=1\text{mA}; I_E=0$	350		V
BV_{EBO}	Emitter-Base Sustaining Voltage	$I_E=1\text{mA}; I_C=0$	4		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.1\text{A}$		1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=50\text{V}; I_B=0$		0.2	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}; I_E=0$		0.5	mA
h_{FE}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=5\text{V}$	40		