

isc Silicon NPN Power Transistor

3DD102D

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

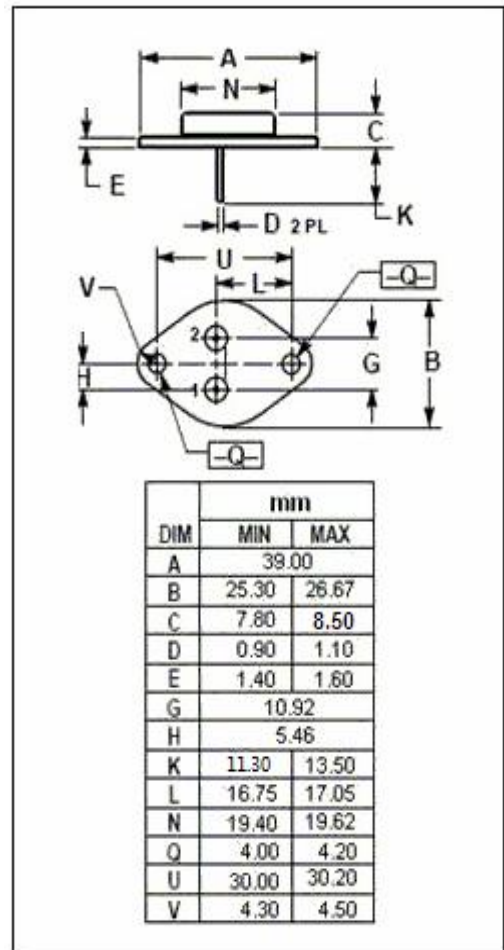
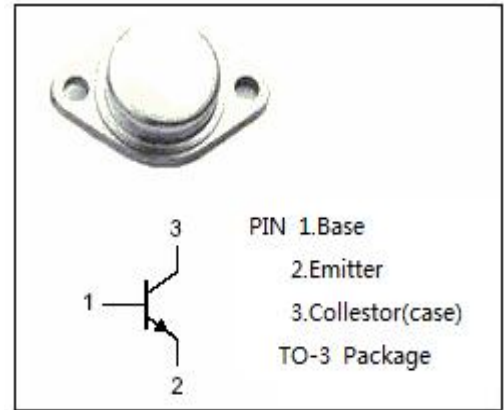
- Designed for use in DC-DC converter
- Driver of solenoid or motor
- For audio amplifier applications

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	300	V
V _{CEO}	Collector-Emitter Voltage	250	V
V _{EBO}	Emitter-Base Voltage	4	V
I _C	Collector Current-Continuous	5	A
P _C	Collector Power Dissipation@T _C =75°C	50	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	2.0	°C/W



isc Silicon NPN Power Transistors**3DD102D****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}; I_B=0$	250		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=5\text{mA}; I_E=0$	300		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=5\text{mA}; I_C=0$	5		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2.5\text{A}; I_B=0.25\text{A}$		1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=50\text{V}; I_B=0$		2.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}; I_E=0$		1.0	mA
h_{FE}	DC Current Gain	$I_C=2\text{A}; V_{CE}=5\text{V}$	20		
f_T	Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=12\text{V}$	1		MHz