

isc Silicon NPN Power Transistor
DD502A
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

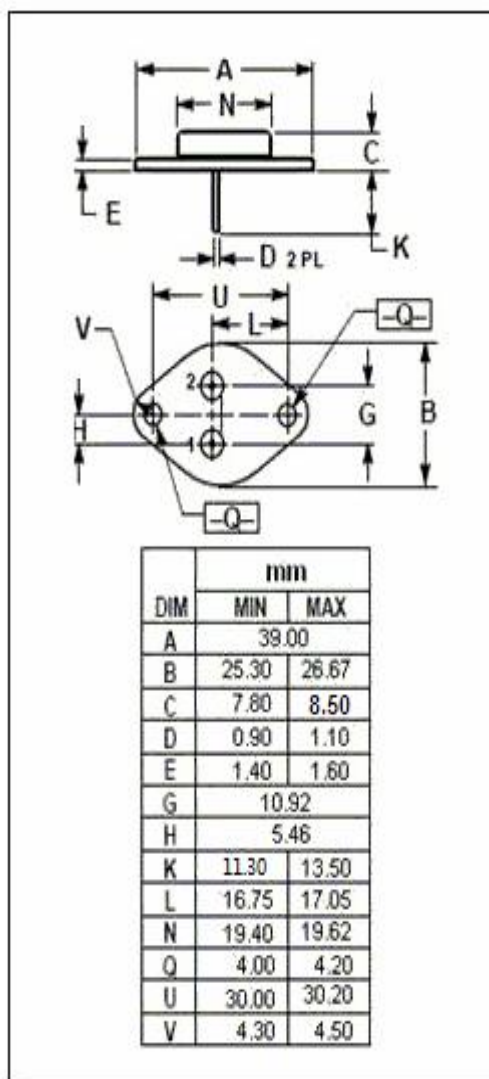
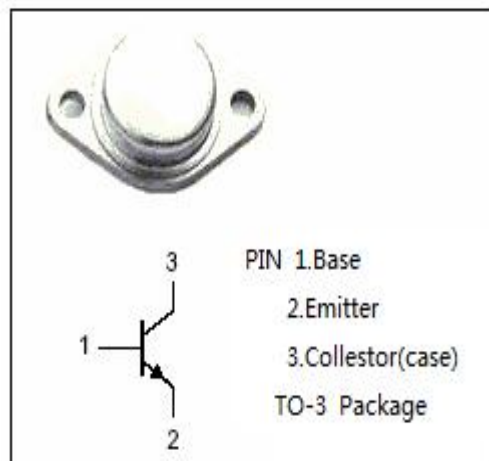
- Designed for use in DC-DC converter
- Driver of solenoid or motor
- For audio amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Peak Collector Current	15	A
P_C	Collector Power Dissipation	50	W
T_J	Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistors**DD502A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; I _B = 0	40		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	80		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	4		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2.5A; I _B = 0.25A		1.5	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 40V; I _B =0		0.2	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 80V; I _E =0		0.2	mA
h _{FE}	DC Current Gain	I _C = 2.5A; V _{CE} = 10V	30		

h_{FE}:

0	P	Q
30~50	50~80	>80

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