

isc Silicon NPN Power Transistor
3DD200D
DESCRIPTION

- Excellent Safe Operating Area
- High DC Current Gain- $h_{FE}=15(\text{Min})@I_C = 8\text{A}$
- Low Saturation Voltage-
: $V_{CE(\text{sat})} = 1.4\text{V}(\text{Max})@I_C = 8\text{A}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

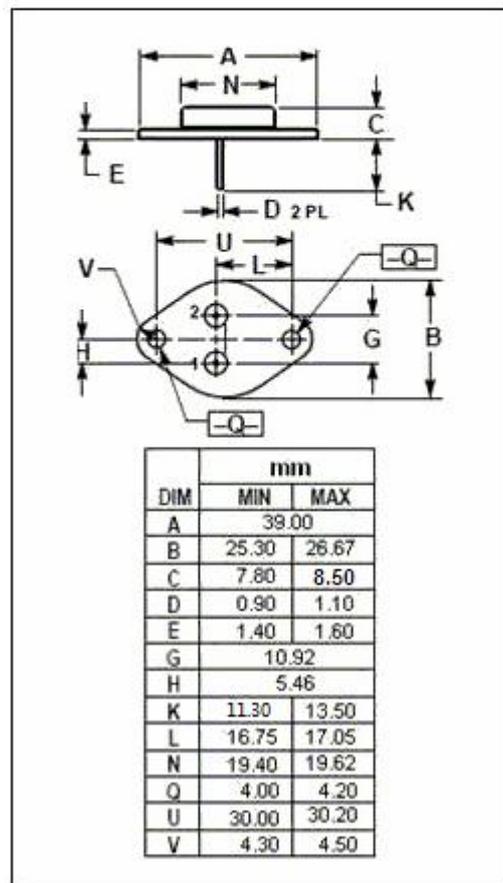
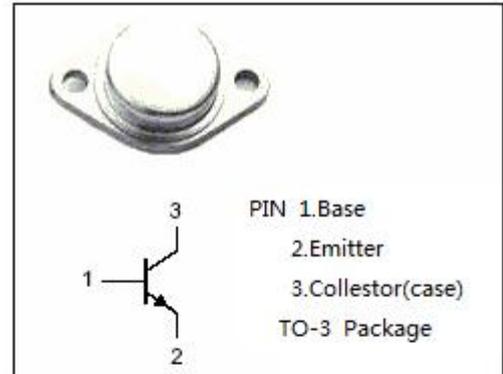
- Designed for high power audio ,disk head positioners and other linear applications, which can also be used in power switching circuits such as relay or solenoid drivers, DC-DC converters or inverters.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	20	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	200	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.14	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}$; $I_B=0$	200		V
V_{CBO}	Collector- Base Sustaining Voltage	$I_B=1\text{mA}$; $I_E=0$	250		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 8\text{A}$; $I_B= 0.8\text{A}$		1.4	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 20\text{A}$; $I_B= 3.2\text{A}$		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 8\text{A}$; $V_{CE}= 4\text{V}$		2.2	V
I_{CEO}	Collector Cutoff Current	$V_{CE}= 200\text{V}$; $I_B=0$		1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 7.0\text{V}$; $I_C=0$		0.1	mA
h_{FE-1}	DC Current Gain	$I_C= 8\text{A}$; $V_{CE}= 4\text{V}$	15	60	
h_{FE-3}	DC Current Gain	$I_C= 20\text{A}$; $V_{CE}= 4\text{V}$	5		

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