

isc Silicon NPN Power Transistor

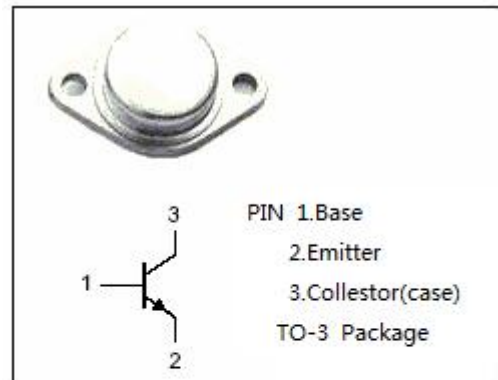
BUS50

DESCRIPTION

- Collector–Emitter Sustaining Voltage
: $V_{CEO(SUS)} = 125V(\text{Min.})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

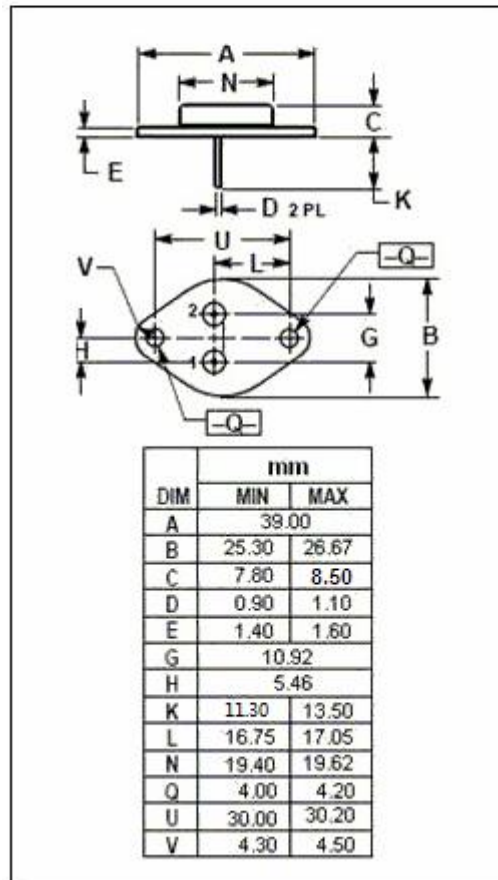
APPLICATIONS

- Designed for low voltage ,high speed,power switching in Inductive circuits where fall time is critical.It is particularly suited for battery switch mode application such as switching regulations.



ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	125	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	70	A
I_B	Base Current	20	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	350	W
T_j	Junction Temperature	-65~200	°C
T_{stg}	Storage Temperature Range	-65~200	°C



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.5	°C/W

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ELECTRICAL CHARACTERISTICS

T_C =25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C =50mA ; I _B = 0	125			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 35A; I _B = 2A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 70A; I _B = 7A			1.2	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 35A; I _B = 2A			1.8	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 70A; I _B = 7A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CE} = 200V; V _{BE} = 0 V _{CE} = 200V; V _{BE} = 0; T _C = 125°C			0.2 2	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			0.2	mA
h _{FE-1}	DC Current Gain	I _C = 5A ; V _{CE} = 4V	20			
h _{FE-2}	DC Current Gain	I _C = 50A ; V _{CE} = 4V	15			

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