

isc Silicon NPN Power Transistor

BUS13

DESCRIPTION

- High Switching Speed
- High Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

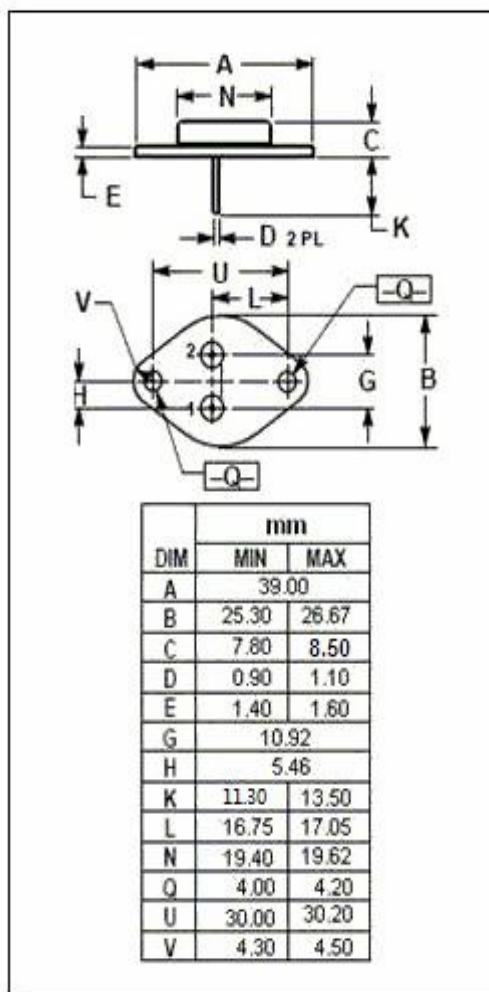
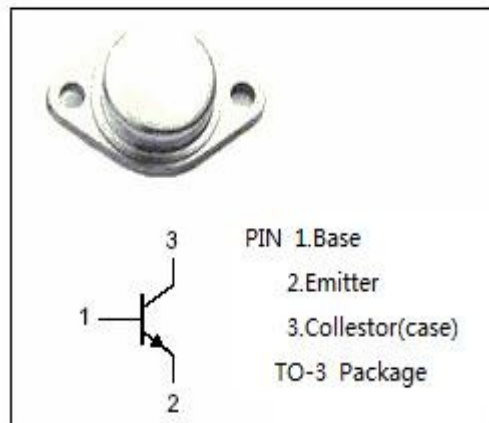
- Converters
- Inverters
- Switching regulators
- Motor controls

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	850	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current	6	A
I_{BM}	Base Current-Peak	9	A
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	175	W
T_j	Junction Temperature	200	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistor**BUS13****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C =50mA ; I _B = 0	400			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 1.6A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 8A; I _B = 1.6A			1.6	V
I _{CES}	Collector Cutoff Current	V _{CE} =V _{CESMmax} ; V _{BE} = 0 V _{CE} = V _{CESMmax} ; V _{BE} = 0; T _C = 125°C			1 4	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 9V; I _C = 0			10	mA
h _{FE}	DC Current Gain	I _C = 2A ; V _{CE} = 5V	15		50	

Switching Times

t _{on}	Turn-on Time	I _C = 8A; I _{B1} = -I _{B2} = 1.6A			1.0	μs
t _s	Storage Time				4.0	μs
t _f	Fall Time				0.8	μs

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