

isc Silicon NPN Power Transistor

BUW87

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 150V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

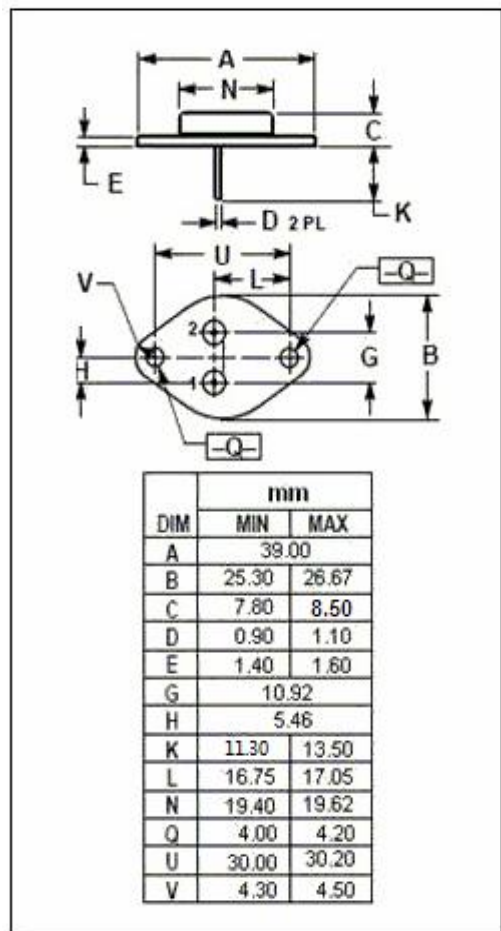
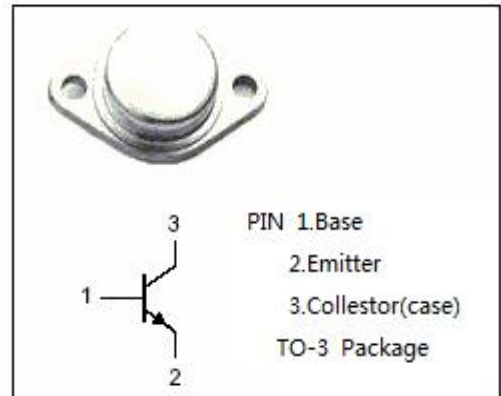
- Designed for use in converters, inverters, switching regulators and switching control amplifiers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CES}	Collector-Emitter Voltage $V_{BE}=0$	300	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	2	A
I_{BM}	Base Current-Peak	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	62.5	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	2.8	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA ; I _B = 0	150			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 0.7A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 0.4A			0.65	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 7A; I _B = 0.7A			1.6	V
I _{CBO}	Collector-Base Cutoff Current	V _{CB} = V _{CBO} ; I _E = 0 V _{CB} = V _{CBO} ; I _E = 0; T _J = 150°C			1 2	mA
h _{FE}	DC Current Gain	I _C = 4A; V _{CE} = 5V	20			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A ; V _{CE} = 5V; f _{test} = 5MHz		50		MHz

Switching Times; Resistive Load

t _{on}	Turn-On Time	I _C = 7A; I _{B1} = -I _{B2} = 0.7A; V _{CC} =75V		0.25	0.4	μs
t _s	Storage Time			0.7	1.3	μs
t _f	Fall Time			0.15	0.3	μs

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