

isc Silicon NPN Power Transistor

BUW77

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(\text{Min.})$
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

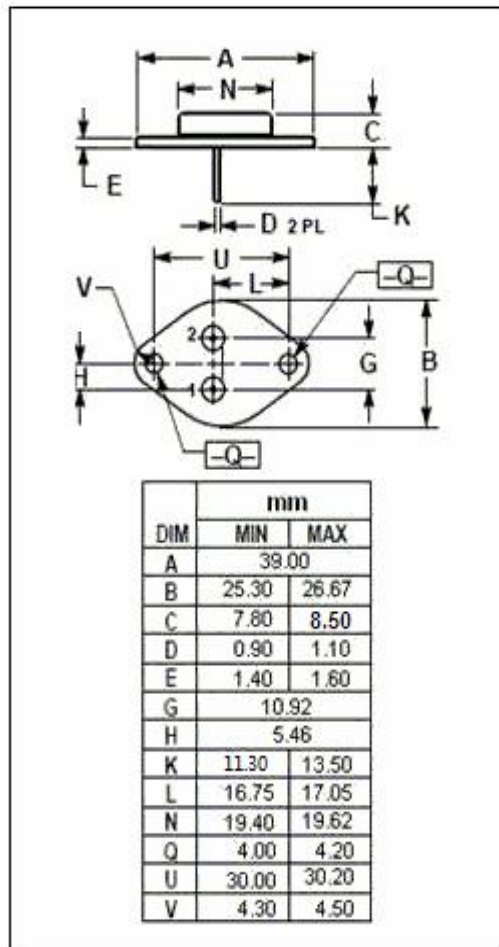
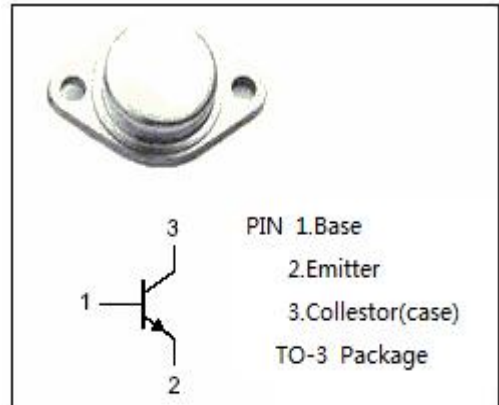
- Intended in fast switching applications for high output powers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	12	A
I_{CM}	Collector Current-Peak	17	A
I_B	Base Current-Continuous	5	A
I_{BM}	Base Current-Peak	7	A
P_T	Total Power Dissipation @ $T_C \leq 25^\circ\text{C}$	120	W
T_J	Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	400			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			1.5	V
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			1.0	mA
I _{CBO}	Collector –Base Cutoff Current	V _{CB} = 800V; I _E = 0 V _{CB} = 800V; I _E = 0; T _C = 125°C			1.0 10	mA
h _{FE}	DC Current Gain	I _C = 5A; V _{CE} = 1.5V	6			
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 10V, f _{test} = 10MHz	10			MHz

Switching Times; Resistive Load

t _{on}	Turn-On Time	I _C = 5A; I _{B1} = -I _{B2} = 1A; V _{CC} =120V; t _p = 10 μs			0.7	μs
t _s	Storage Time				3.0	μs
t _f	Fall Time				0.7	μs

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