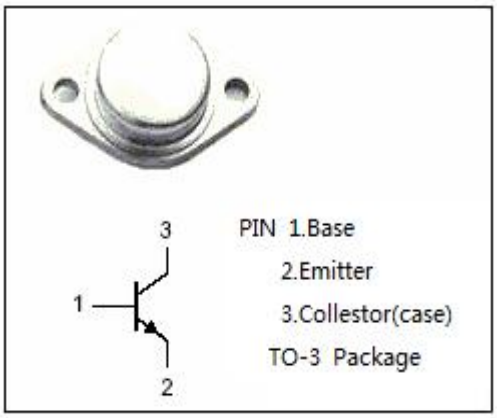
isc Silicon NPN Power Transistor — BUW77

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 400V(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.

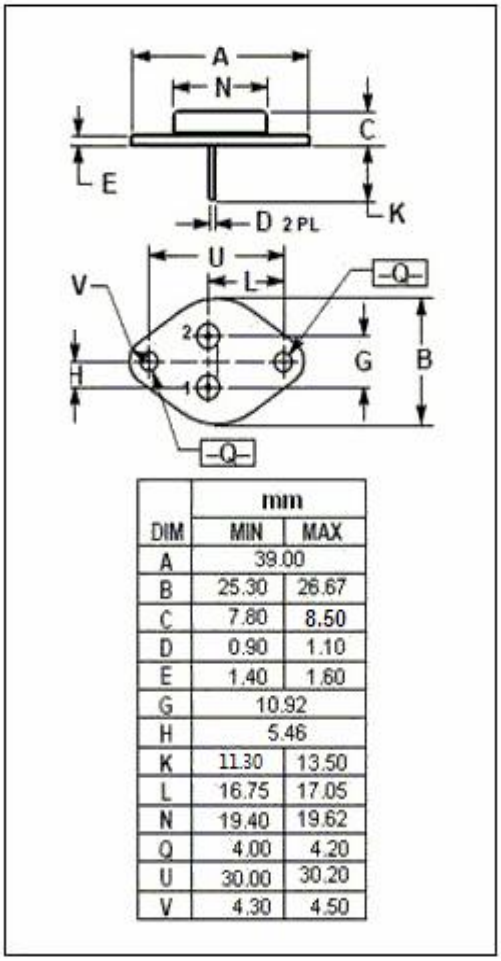


ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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≤25℃	120	W
T_J	Junction Temperature	175	℃
T_{stg}	Storage Temperature Range	-65~175	℃

THERMAL CHARACTERISTICS

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



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	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℃			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 μ s			0.7	μ s
t_s	Storage Time				3.0	μ s
t_f	Fall Time				0.7	μ s