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Silicon NPN Power Transistor

BUW50

DESCRIPTION

- High Current Capability
- Fast Switching Speed
- Low Saturation Voltage and High Gain

APPLICATIONS

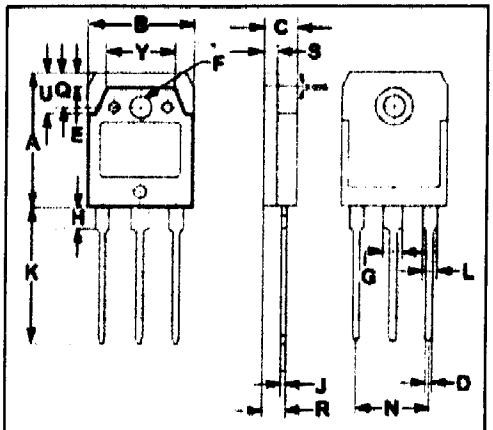
- Designed for use in general purpose power amplifier applications.

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage (V_{BE}= -1.5V)	250	V
V_{CEO}	Collector-Emitter Voltage	125	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	25	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	6	A
I_{BM}	Base Current-peak	12	A
P_C	Collector Power Dissipation @T_C=25℃	150	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	1.0	℃/W



DIM	mm MIN	MAX
A	19.90	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 0.2A; I_B= 0; L= 25mH	125			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 50mA; I_C= 0	7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 0.5A			0.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 20A; I_B= 2A			0.9	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 20A; I_B= 2A			1.6	V
I_{CER}	Collector Cutoff Current	V_{CE}= V_{CEV}; R_{BE}= 10Ω V_{CE}= V_{CEV}; R_{BE}= 10Ω; T_C=100℃			1.0 5.0	mA
I_{CEV}	Collector Cutoff Current	V_{CE}= V_{CEV}; V_{BE}= -1.5V V_{CE}= V_{CEV}; V_{BE}= -1.5V; T_C=100℃			1.0 5.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1.0	mA

Switching times; Resistive Load

t_r	Rise Time	I_C= 24A; I_{B1}= 3A; V_{CC}= 100V; V_{BB}= -5V; R_B= 0.83Ω; t_p= 30μs			0.6	μs
t_s	Storage Time				1.2	μs
t_f	Fall Time				0.3	μs