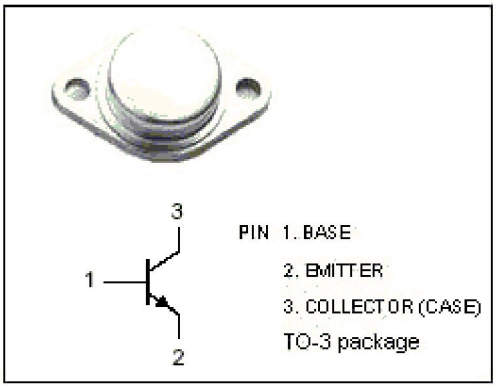
isc Silicon NPN Power Transistor BUV22

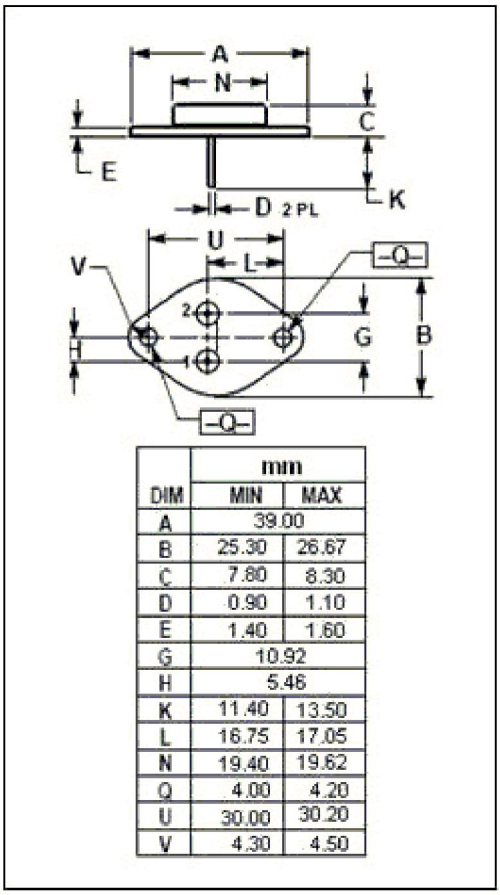
DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.0V (Max.) @I_C= 10A
- High Switching Speed
- High DC Current Gain-
  : h_{FE}= 20(Min.) @I_C= 10A

APPLICATIONS

- Designed for high current, high speed, high power applications.





DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	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

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CER}	Collector-Emitter Voltage R_{BE}= 100Ω	290	V
V_{CEX}	Collector-Emitter Voltage V_{BE}= -1.5V	300	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	40	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	8	A
P_C	Collector Power Dissipation @T_C=25℃	250	W
T_j	Junction Temperature	200	℃
T_{stg}	Storage Temperature Range	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.7	℃/W

isc Silicon NPN Power Transistor BUV22

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	250			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= 1A			1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 20A ;I_B= 2.5A			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 40A ;I_B= 4A			1.5	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 200V; I_B= 0			3.0	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= 300V;V_{BE}= -1.5V V_{CE}= 300V;V_{BE}= -1.5V;T_C=125℃			3.0 12.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1.0	mA
h_{FE-1}	DC Current Gain	I_C= 10A ; V_{CE}= 4V	20		60	
h_{FE-2}	DC Current Gain	I_C= 20A ; V_{CE}= 4V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 2A;V_{CE}= 15V, f_{test}= 4MHz	8			MHz

Switching Times

t_{on}	Turn-on Time	I_C= 20A; I_{B1}=-I_{B2}= 2.5A; V_{CC}= 100V; R_C= 5Ω			0.8	μs
t_s	Storage Time				2.0	μs
t_f	Fall Time				0.35	μs