



NPN BUV23

POWER SWITCH APPLICATIONS

The BUV23 is silicon multiepitaxial mesa NPN transistors in Jedec TO-3. They are intended for use in power switching applications in military and industrial equipments.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage	$I_B = 0$	325	V
V_{CBO}	Collector-Base Voltage	$I_E = 0$	400	V
V_{EBO}	Emitter-Base Voltage	$I_C = 0$	7.0	V
V_{CEX}	Collector-Emitter Voltage	$V_{BE} = -1.5V$	400	V
V_{CER}	Collector-Emitter Voltage	$R_{BE} \leq 100 \Omega$	390	V
I_C	Collector Current		30	A
I_{CM}	Collector Peak Current	$t_p = 10ms$	40	A
I_B	Base Current		6	A
P_t	Total Power Dissipation	@ $T_C = 25^\circ$	250	Watts
T_J	Junction Temperature		200	$^\circ C$
T_{Stg}	Storage Temperature		-65 to +200	$^\circ C$

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	0.7	$^\circ C/W$

ELECTRICAL CHARACTERISTICS

$T_C = 25^\circ C$ unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (1)	$I_C = 200 \text{ mA}$, $L = 25 \text{ mH}$	325	-	-	V
$V_{EBO(SUS)}$	Emitter-Base Breakdown Voltage (1)	$I_C = 0 \text{ A}$, $I_E = 50 \text{ mA}$	7	-	-	V
I_{CEO}	Collector Cutoff Current	$V_{CE} = 260 \text{ V}$, $I_B = 0 \text{ A}$	-	-	3	mA
I_{CEX}	Collector Cutoff Current	$V_{CE} = V_{CEX}$, $V_{BE} = -1.5V$	-	-	3	mA
		$V_{CE} = V_{CEX}$, $V_{BE} = -1.5V$, $T_{case} = 125^\circ C$	-	-	12	mA

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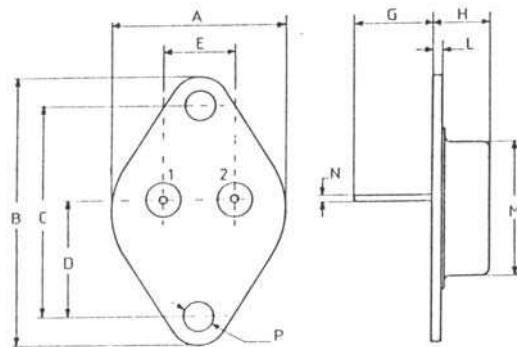
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5.0\text{ V}, I_C=0$	-	-	1	mA
h_{FE}	DC Current Gain (1)	$I_C=8\text{ A}, V_{CE}=4.0\text{ V}$	15	-	60	-
		$I_C=16\text{ A}, V_{CE}=4.0\text{ V}$	8	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (1)	$I_C=8\text{ A}, I_B=1.6\text{ A}$	-	0.2	0.8	V
		$I_C=16\text{ A}, I_B=3.2\text{ A}$	-	0.35	1	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (1)	$I_C=16\text{ A}, I_B=3.2\text{ A}$	-	1.15	1.5	

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
f_T	Transition frequency	$V_{CE}=15\text{ V}, I_C=2\text{ A}, f=10\text{ MHz}$	8	-	-	MHz
t_{on}	Turn-on time	$I_C=16\text{ A}, I_B=3.2\text{ A}$	-	0.55	1.3	
t_s	Storage time	$I_C=16\text{ A}$ $I_{B1} = -I_{B2} = 3.2\text{ A}$	-	1.7	2.5	μs
t_f	File time		-	0.26	1.2	

(1) Pulse Duration = 300 μs , Duty Cycle $\leq 2\%$

MECHANICAL DATA CASE TO-3

DIMENSIONS		
	mm	inches
A	25,51	1,004
B	38,93	1,53
C	30,12	1,18
D	17,25	0,68
E	10,89	0,43
G	11,62	0,46
H	8,54	0,34
L	1,55	0,6
M	19,47	0,77
N	1	0,04
P	4,06	0,16



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector

Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.

Data are subject to change without notice.