



NPN BUX98

HIGH VOLTAGE FAST SWITCHING

The BUX98 is silicon multiepitaxial NPN transistor in Jedec TO-3. They are intended and industrial applications from single and three-phase mains operation. Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage	$I_B = 0$	400	V
V_{CBO}	Collector-Base Voltage	$V_{BE} = 0$	850	V
V_{EBO}	Emitter-Base Voltage	$I_C = 0$	7	
I_C	Collector Current		30	A
I_{CM}	Collector Peak Current	$t_p = <5ms$	60	A
I_{CP}	Collector Peak Current non Rep.	$t_p = <20\mu s$	80	A
I_B	Base Current		8	A
I_{BM}	Base Peak Current	$t_p = <5ms$	30	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	$^\circ C/W$

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

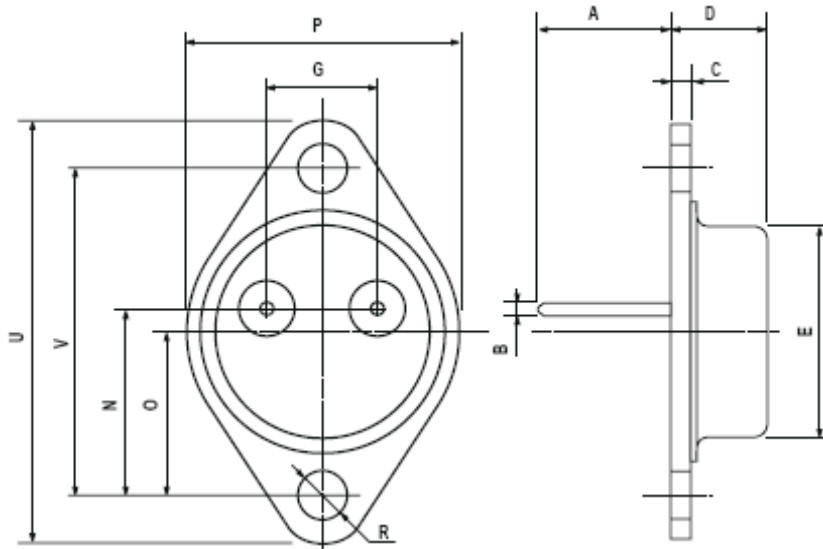
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	$I_C = 100 \text{ mA}$	700	-	-	V
I_{CER}	Collector Cutoff Current	$V_{CE} = V_{CES}, R_{BE} = 10\Omega$	-	-	1	mA
		$V_{CE} = V_{CES}, R_{BE} = 10\Omega$ $T_{CASE} = 125^\circ\text{C}$	-	-	8	
I_{CEO}	Collector Cutoff Current	$V_{CE} = V_{CEO}, I_B = 0\text{A}$	-	-	2	mA
I_{CES}	Collector Cutoff Current	$V_{CE} = V_{CES}, V_{BE} = 0$	-	-	1	mA
		$V_{CE} = V_{CES}, V_{BE} = 0$ $T_{CASE} = 125^\circ\text{C}$	-	-	6	
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 5.0 \text{ V}, I_C = 0$	-	-	2	mA
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = 12 \text{ A}, I_B = 3 \text{ A}$	-	-	1.5	V
		$I_C = 16 \text{ A}, I_B = 5 \text{ A}$	-	-	2	
		$I_C = 20 \text{ A}, I_B = 8 \text{ A}$	-	-	3	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	$I_C = 12 \text{ A}, I_B = 3 \text{ A}$	-	-	1.6	V
		$I_C = 20 \text{ A}, I_B = 8 \text{ A}$	-	-	2	
t_{on}	Turn-on time	RESISTIVE LOAD $I_C = 8 \text{ A}, I_B = 1 \text{ A}$	-	0.5	1	μs
t_s	Storage time	$V_{CC} = 150 \text{ V}$ $I_C = 12 \text{ A}, V_{CC} = 250 \text{ V}$	-	1.5	3	
t_f	File time	$I_{B1} = -I_{B2} = 3 \text{ A}$	-	0.2	0.8	

(*) Pulse Duration = 300 μs , Duty Cycle $\leq 1.5\%$

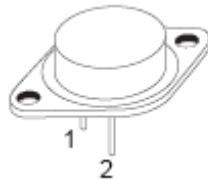
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MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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