NPN BUX48C

HIGH VOLTAGE FAST-SWITCHING POWER TRANSISTOR

The BUX48C is silicon multiepitaxial mesa NPN transistor in Jedec TO-3.
They are intended for use in switching and industrial equipment.
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage	$I_B = 0$	700	V
V_{CES}	Collector-Emitter Voltage	$V_{BE} = 0$	1200	V
V_{CBO}	Collector-Base Voltage	$I_E = 0$	1200	V
V_{EBO}	Emitter-Base Voltage	$I_C = 0$	7	V
I_C	Collector Current		15	A
I_{CM}	Collector Current Peak	t_p = 5ms	30	A
I_B	Base Current		4	A
I_{BM}	Base Current Peak		20	A
P_t	Total Power Dissipation	@ T_C = 25°	175	Watts
T_J	Junction Temperature		200	℃
T_{Stg}	Storage Temperature		-65 to +200	℃

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	1	℃/W

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ELECTRICAL CHARACTERISTICS

TC=25℃ unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	I_C= 100 mA	700	-	-	V
V_{EBO}	Emitter-Base Voltage	I_C= 0A, I_E= 50 mA	7	-	30	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 700 V, I_B= 0A	-	-	1	mA
I_{CES}	Collector Cutoff Current	V_{CE}= 1200 V, V_{BE}= 0V	-	-	0.5	mA
		V_{CE}= 1200 V, V_{BE}= 0V T_{case} = 125℃	-	-	3	
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6 V, I_C= 0	-	-	1	mA
h_{FE}	DC Current Gain (*)	I_C= 1 A, V_{CE}= 5 V	15	-	50	-
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (1)	I_C= 6 A, I_B= 1.5 A	-		1.5	V
		I_C= 10 A, I_B= 4 A	-		3	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	I_C= 6 A, I_B= 1.5 A	-		1.5	
		I_C= 10 A, I_B= 4 A	-		2	

SWITCHING TIMES

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
t_{on}	Turn-on time	I_C=6 A , I_{B1} = -I_{B2} =1.5 A V_{CC}=250 V	-	0.5	1.0	µs
t_s	Storage time		-	1.5	3	
t_f	File time		-	0.2	0.7	

(*) Pulse Duration = 300 µs, Duty Cycle <= 2%

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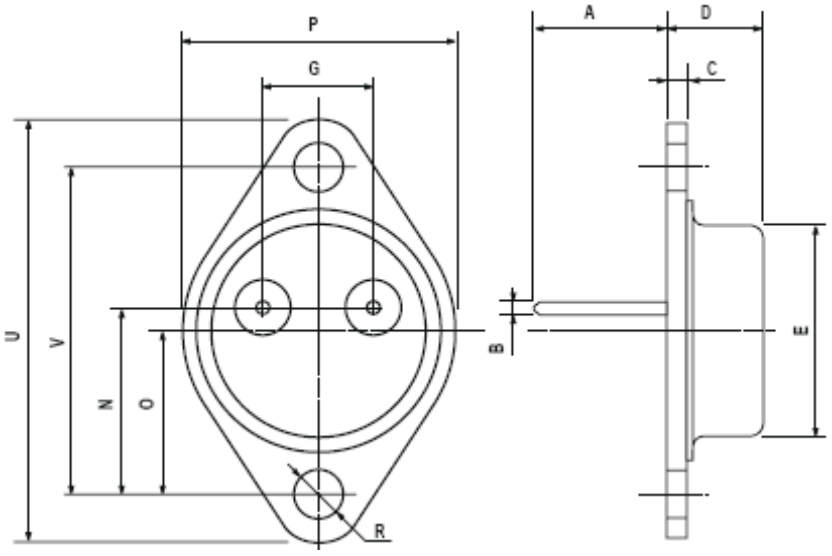
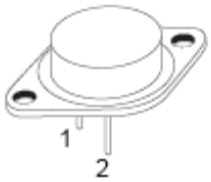
MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)			
	min	typ	max
A	11	-	13.10
B	0.97	-	1.15
C	1.5	-	1.65
D	8.32	-	8.92
E	19	-	22
G	10.70	-	11.1
N	16.50	-	17.20
P	25	-	27,20
R	3.84	-	4.21
U	38.50	-	40.13
V	29.90	-	30.40



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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