BUR52

HIGH CURRENT NPN SILICON TRANSISTORS

The BUR52 is a silicon multiepitaxial planar NPN transistor in modified jedec TO-3 metal case,
Intented for use in switching and linear applications in military and industrial equipment.
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage (I_B = 0)		250	V
V_{CBO}	Collector-Base Voltage (I_E = 0)		350	V
V_{EBO}	Emitter-Base Voltage (I_C = 0)		10	V
I_C	Collector Current	I_C	60	A
		I_{CM} t_p = (10 ms)	80	
I_B	Base Current		16	A
P_T	Power Dissipation	@ T_C = 25°	350	W
T_J	Junction Temperature		200	°C
T_S	Storage Temperature		-55 to +200	

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-C}	Thermal Resistance, Junction to Case	0.5	°C/W

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

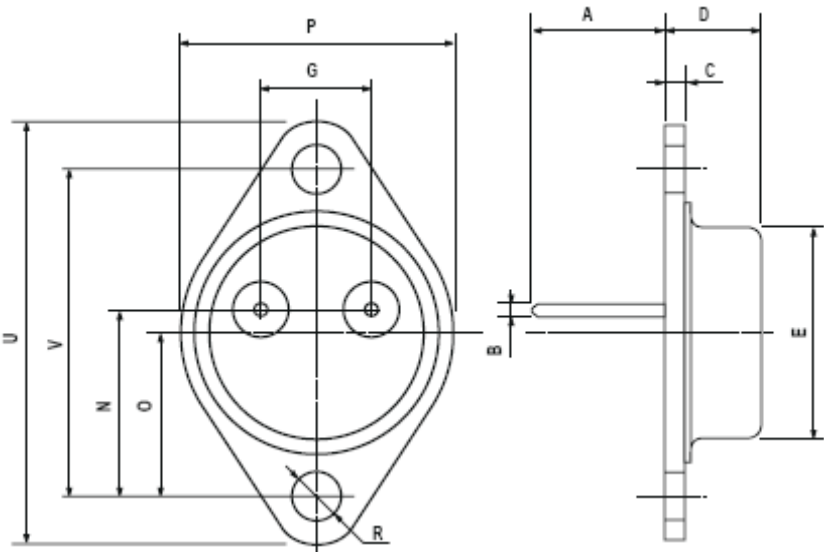
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
I_{CEO}	Collector Cutoff Current	V_{CE} = 250 V, (I_B = 0)	-	-	1	mA
I_{EBO}	Emitter Cutoff Current	V_{BE} = 7 V, (I_C = 0)	-	-	0.2	µA
I_{CBO}	Collector Cutoff Current	T_{CASE} = 25°C V_{CB} = 350 V, (I_E = 0)	-	-	0.2	mA
		T_{CASE} = 125°C V_C = 350 V, (I_E = 0)	-	-	2	
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	I_C = 200 A	250	-	-	V
V_{EBO}	Emitter-Base Voltage	I_C = 10 mA, (I_C = 0)	10	-	-	V
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C = 25 A, I_B = 2 A	-	-	1	V
		I_C = 40 A, I_B = 4 A	-	0.7	1.5	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	I_C = 25 A, I_B = 2 A	-	-	1.8	V
		I_C = 40 A, I_B = 4 A	-	1.5	2	
h_{FE}	DC Current Gain (*)	V_{CE} = 4 V, I_C = 5 A	20	-	100	-
		V_{CE} = 4 V, I_C = 40 A	15	-	-	
$I_{s/b}$	Second Breakdown Collector Current	V_{CE} = 20 V, t = 1 s	17.5	-	-	A
f_T	Transition - Frequency	V_{CE} = 5 V, I_C = 1 A f = 1 MHz	-	10	16	MHz
t_{on}	Turn-on time	V_{CC} = 100 V I_C = 40 A ; I_{B1} = 4 A	-	0.3	1	µs
t_s	Storage Time	V_{CC} = 100 V I_C = 40 A I_{B1}= 4 A, I_{B2} = -4 A	-	1.2	2	µs
f_f	Fall Time		-	0.2	0.6	
	Clamped $E_{s/b}$ Collector Current	V_{clamp} = 250 V L = 500 µH	40	-	-	A

(*) Pulse duration = 300 µs, Duty Cycle ∠ 1.5 %

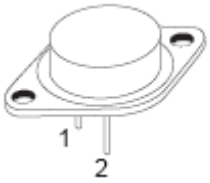
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MECHANICAL DATA CASE TO-3

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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