

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	
Ic Collect	Collector Current	I _C	60	^	
		$I_{CM} t_{p} = (10 \text{ ms})$	80	A	
I _B	Base Current		16	А	
Ρτ	Power Dissipation	@ T _C = 25°	350	W	
TJ	Junction Temperature		200	°C	
Τs	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	Тур	Max	Unit	
I _{CEO}	Collector Cutoff Current	$V_{CE} = 250 \text{ V}, (I_B = 0)$	-	-	1	mA	
I _{EBO}	Emitter Cutoff Current	$V_{BE} = 7 V, (I_{C} = 0)$	-	-	0.2	μA	
	Collector Cutoff Current	$T_{CASE} = 25^{\circ}C$ $V_{CB} = 350 \text{ V}, (I_E = 0)$	-	-	0.2	- mA	
I _{CBO}		$T_{CASE} = 125^{\circ}C$ V _C = 350 V, (I _E = 0)	-	-	2		
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage (*)	$I_{\rm C} = 200 \text{ A}$	250	-	-	V	
V _{EBO}	Emitter-Base Voltage	$I_{\rm C} = 10$ mA, $(I_{\rm C} = 0)$	10	-	-	V	
V _{CE(SAT)}	Collector-Emitter saturation Voltage (*)	$I_{\rm C} = 25$ A, $I_{\rm B} = 2$ A	-	-	1	V	
		$I_{\rm C} = 40$ A, $I_{\rm B} = 4$ A	-	0.7	1.5		
$\mathbf{V} = -\mathbf{v} = \mathbf{v}$	Base-Emitter saturation Voltage (*)	$I_{\rm C} = 25 \text{ A}, I_{\rm B} = 2 \text{ A}$	-	-	1.8	V	
		$I_{\rm C} = 40$ A, $I_{\rm B} = 4$ 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	-	-	А	
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	$V_{CC} = 100 V$ $I_{C} = 40 A$	-	1.2	2	μs	
f _f	Fall Time	$I_{B1} = 4 \text{ A}, I_{B2} = -4 \text{ A}$	-	0.2	0.6	_ F ~	
	Clamped E _{s/b} Collector Current	V _{clamp} = 250 V L = 500 μH	40	-	-	А	

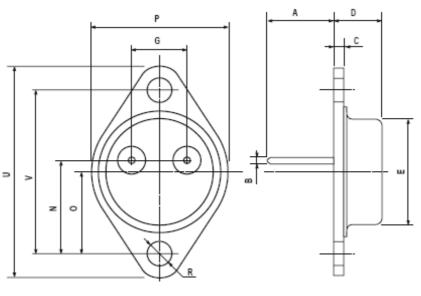
(*) Pulse duration = 300 $\mu s,$ Duty Cycle \angle 1.5 %



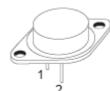
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MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)			
	min	max	
A	11	13.10	
В	0.97	1.15	
С	1.5	1.65	
D F	8.32	8.92	
	19	20	
G	10.70	11.1	
Ν	16.50	17.20	
Р	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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