

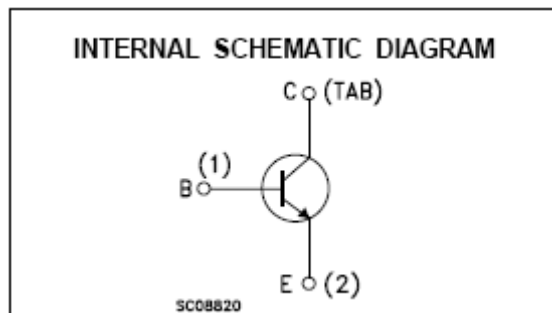
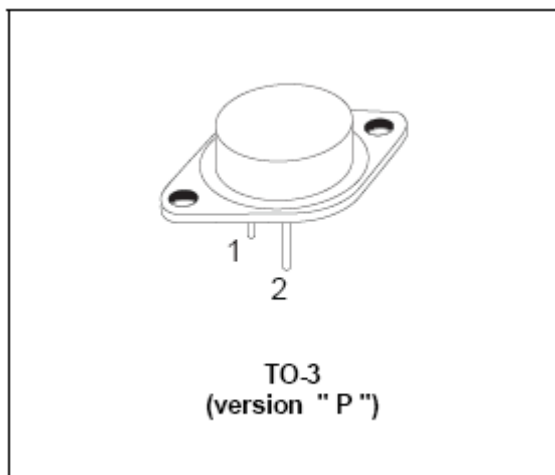
BUR52

HIGH CURRENT NPN SILICON TRANSISTORS

LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

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

Compliance to RoHS.



ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit	
V_{CE0}	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
		$I_{CM} t_p = (10 \text{ ms})$	80	

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Symbol	Ratings	Value	Unit
I_B	Base Current	16	A
P_T	Power Dissipation @ $T_C = 25^\circ$	350	Watts
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

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
I_{CEO}	Collector Cutoff Current	$V_{CE} = 250 \text{ V}; (I_B = 0)$	-	-	1	mA
I_{EBO}	Emitter Cutoff Current	$V_{BE} = 7 \text{ V}; (I_C = 0)$	-	-	0.2	μA
I_{CBO}	Collector Cutoff Current	$T_{CASE} = 25^\circ\text{C}; V_{CB} = 350 \text{ V}; (I_E = 0)$	-	-	0.2	mA
		$T_{CASE} = 125^\circ\text{C}; V_C = 350 \text{ V}; (I_E = 0)$	-	-	2	
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	$I_C = 200 \text{ A}$	250	-	-	V
V_{EBO}	Emitter-Base Voltage	$I_C = 10 \text{ mA}; (I_C = 0)$	10	-	-	V
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = 25 \text{ A}; I_B = 2 \text{ A}$	-	-	1	V
		$I_C = 40 \text{ A}; I_B = 4 \text{ A}$	-	0.7	1.5	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	$I_C = 25 \text{ A}; I_B = 2 \text{ A}$	-	-	1.8	V
		$I_C = 40 \text{ A}; I_B = 4 \text{ A}$	-	1.5	2	

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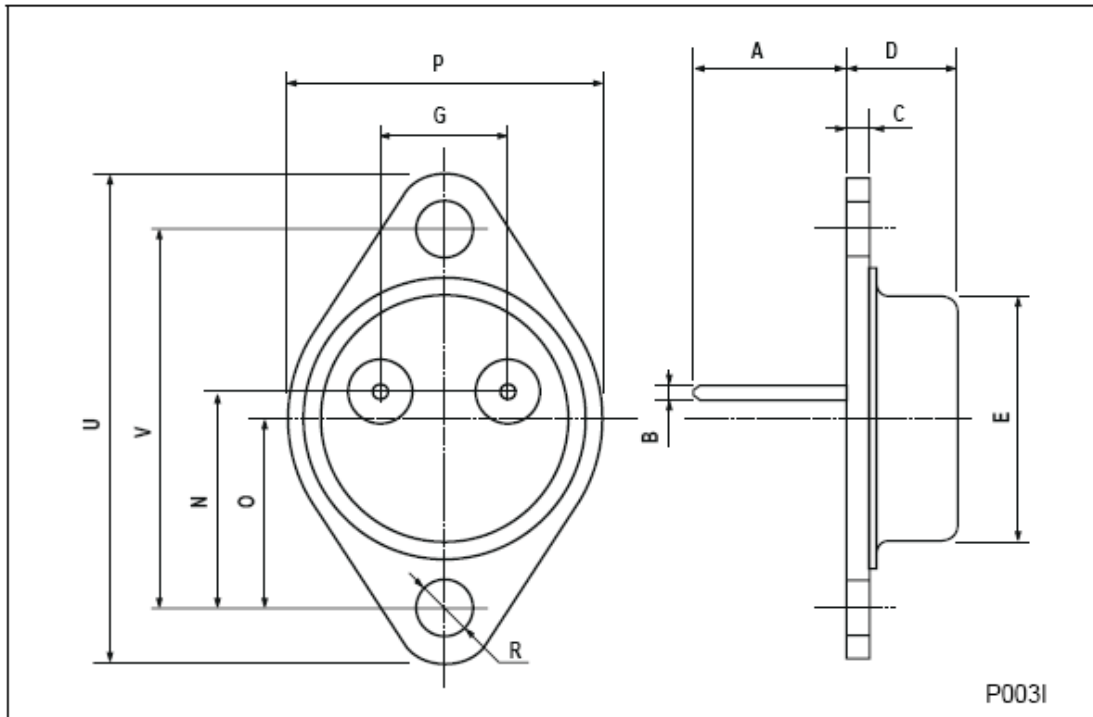
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
h_{FE}	DC Current Gain (*)	$V_{CE} = 4 \text{ V} ; I_C = 5 \text{ A}$	20	-	100	-
		$V_{CE} = 4 \text{ V} ; I_C = 40 \text{ A}$	15	-	-	
$I_{s/b}$	Second Breakdown Collector Current	$V_{CE} = 20 \text{ V} ; t = 1 \text{ s}$	17.5	-	-	A
f_T	Transition - Frequency	$V_{CE} = 5 \text{ V} ; I_C = 1 \text{ A} ; f = 1 \text{ MHz}$	-	10	16	MHz
t_{on}	Turn-on time	$V_{CC} = 100 \text{ V} ; I_C = 40 \text{ A} ; I_{B1} = 4 \text{ A}$	-	0.3	1	μs
t_s	Storage Time	$V_{CC} = 100 \text{ V} ; I_C = 40 \text{ A}$ $I_{B1} = 4 \text{ A} ; I_{B2} = -4 \text{ A}$	-	1.2	2	μs
f_f	Fall Time		-	0.2	0.6	
	Clamped $E_{s/b}$ Collector Current	$V_{clamp} = 250 \text{ V} ; L = 500 \mu\text{H}$	40	-	-	A

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

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TO-3 (version P) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00	11.7	13.10	0.433		0.516
B	1.45	1.5	1.60	0.057		0.063
C	2.7		2.92	0.106		0.115
D	8.9		9.4	0.350		0.370
E	19.00		20.00	0.748		0.787
G	10.70	10.9	11.10	0.421	0.429	0.437
N	16.50	16.9	17.20	0.650	0.665	0.677
P	25.00		26.00	0.984		1.024
R	3.88		4.2	0.153		0.165
U	38.50		39.30	1.516		1.547
V	30.00	30.14	30.30	1.181	1.186	1.193



*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*