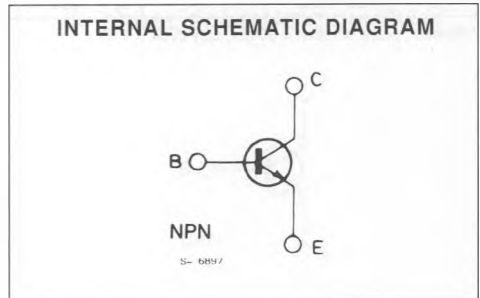
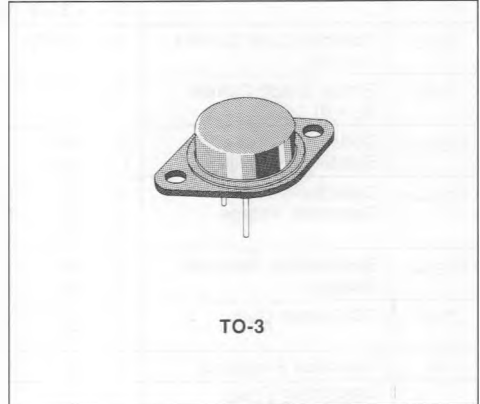


HIGH CURRENT, HIGH SPEED, HIGH POWER TRANSISTOR

ADVANCE DATA

- HIGH CURRENT
- HIGH SWITCHING SPEED
- HIGH POWER
- GOOD SOA
- GOOD RBSOA



DESCRIPTION

The BUR21 is a silicon multi-epitaxial planar NPN transistor in modified Jedec TO-3 metal case, intended for use in switching and linear low voltage, high current applications in military and industrial equipments.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	300	V
V_{CEX}	Collector-emitter Voltage ($V_{BE} = -1.5V$)	300	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	200	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	7	V
I_C	Collector Current	40	A
I_{CM}	Collector Peak Current ($t_p < 10ms$)	50	A
I_B	Base Current	10	A
P_{tot}	Total Dissipation at $T_c < 25^\circ C$	250	W
T_{stg}	Storage Temperature	-65 to 200	$^\circ C$
T_j	Max. Operating Junction Temperature	200	$^\circ C$

THERMAL DATA

$R_{th(j-case)}$	Thermal Resistance Junction-case	max	0.7	°C/W
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEX}	Collector Cutoff Current	$V_{CE} = 300V$ $V_{BE} = -1.5V$ $V_{CE} = 300V$ $V_{BE} = -1.5V$ $T_C = 125^{\circ}C$			500 6	μA mA
I_{CEO}	Collector Cutoff Current ($I_B = 0$)	$V_{CE} = 200V$			1	mA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 7V$			1	mA
$V_{CE(sus)^*}$	Collector Emitter Sustaining Voltage	$I_C = 0.2A$ $L = 25mH$	200			V
$V_{CE(sat)^*}$	Collector-emitter Saturation Voltage	$I_C = 12A$ $I_B = 1.2A$ $I_C = 25A$ $I_B = 3A$ $I_C = 30A$ $I_B = 5A$			0.6 1.5 1.5	V V V
$V_{BE(sat)^*}$	Base-emitter Saturation Voltage	$I_C = 25A$ $I_B = 3A$ $I_C = 50A$ $I_B = 5A$			1.8 2.2	V V
h_{FE}^*	DC Current Gain	$I_C = 12A$ $V_{CE} = 2V$ $I_C = 25A$ $V_{CE} = 4V$	15 10		60	
f_T	Transition Frequency	$I_C = 1A$ $V_{CE} = 15V$ $f = 10MHz$		20		MHz
t_{on} t_s t_f	RESISTIVE LOAD Turn-on Time Storage Time Fall Time	$I_C = 25A$ $I_{B1} = - I_{B2} = 3A$ $V_{CC} = 100V$ $V_{BB} = -6V$ $t_p = 10\mu s$			1 1.8 0.4	μs μs μs

* Pulsed : pulse duration = 300 μs , duty cycle = 1.5%.