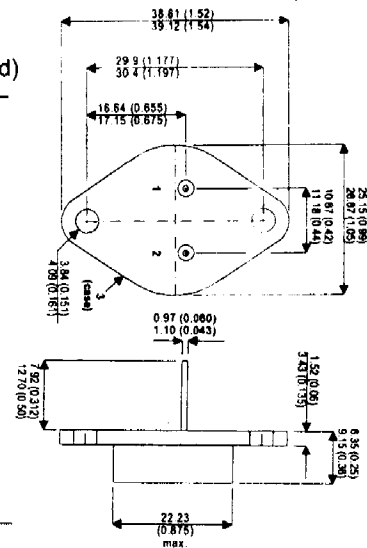


BUX12

NPN MULTI - EPITAXIAL POWER TRANSISTOR

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector - Base Voltage ($I_E = 0$)	300V
V_{CEX}	Collector - Emitter Voltage ($V_{BE} = -1.5V$)	300V
V_{CEO}	Collector - Emitter Voltage ($I_B = 0$)	250V
V_{EBO}	Emitter - Base Voltage ($I_C = 0$)	7V
I_C	Collector Current	20A
I_{CM}	Peak Collector Current ($t_p = 10$ ms)	25A
I_B	Base Current	4A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^{\circ}C$	150W
T_{stg}	Storage Temperature	-65 to $200^{\circ}C$
T_j	Junction Temperature	$200^{\circ}C$



TO-3

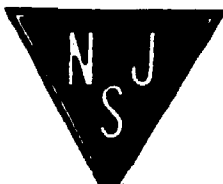
PIN 1 — Bas
PIN 2 — Emi
Case is Colle

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(sus)^*}$	Collector - Emitter Sustaining Voltage $I_C = 0.2mA$	250			V
V_{EBO}	Emitter - Base Voltage $I_E = 50mA$	7			V
I_{CEO}	Collector Cut-off Current $V_{CE} = 200V$			1.5	mA
I_{CEX}	Collector Cut-off Current $V_{CE} = 300V$ $V_{BE} = -1.5V$ $V_{CE} = 300V$ $V_{BE} = -1.5V$ $T_C = 125^{\circ}C$			1.5 6	mA
I_{EBO}	Emitter Cut-off Current $I_C = 0$ $V_{EB} = 5V$			1	mA
$V_{CE(sat)^*}$	Collector - Emitter Saturation Voltage $I_C = 5A$ $I_C = 10A$ $I_B = 0.5A$ $I_B = 1.25A$		0.22 0.5	1 1.5	V
$V_{BE(sat)^*}$	Base - Emitter Saturation Voltage $I_C = 10A$ $I_B = 1.25A$		1.23	1.5	V
η_{FE}^*	DC Current Gain $I_C = 5A$ $I_C = 10A$ $V_{CE} = 4V$ $V_{CE} = 4V$	20 10		60	—
$I_{S/b}$	Second Breakdown Collector Current $V_{CE} = 30V$ $V_{CE} = 140V$ $t = 1s$ $t = 1s$	5 0.15			A
f_T	Transition Frequency $I_C = 1A$ $f = 10MHz$ $V_{CE} = 15V$	8			MHz
t_{on}	Turn-On Time $I_C = 10A$ $V_{CC} = 150V$ $I_{B1} = 1.25A$		0.28	1	μs
t_s	Storage Time $I_C = 10A$ $I_{B1} = 1.25A$		1.45	2	μs
t_f	Fall Time $I_{B2} = -1.25A$ $V_{CC} = 150V$		0.23	0.5	μs

THERMAL CHARACTERISTICS

$R_{\theta JC}$ Thermal Resistance Junction to Case	1.17	$^{\circ}C/W$
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