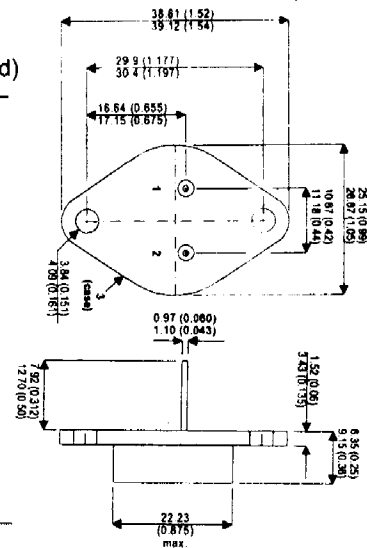


**BUX12**

**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

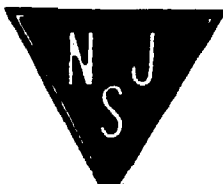
PIN 1 — Bas  
PIN 2 — Emi  
Case is Colle

**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
$h_{FE}^*$	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	$\mu s$
$t_s$	Storage Time $I_C = 10A$ $I_{B1} = 1.25A$		1.45	2	$\mu s$
$t_f$	Fall Time $I_{B2} = -1.25A$ $V_{CC} = 150V$		0.23	0.5	$\mu s$

**THERMAL CHARACTERISTICS**

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