



element14

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[BUX80](#)

EN

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Cette fiche technique est
présentée par le fabricant

Transistor, NPN TO-3



Description:

High voltage power transistor.

Designed for use in high-voltage, high-speed, power switching in inductive circuit, motor control, solenoid and relay drivers.

Features:

- Collector-emitter sustaining voltage - $V_{CEO(sus)} = 4,000V$ (Min.)
- Low collector-emitter saturation voltage - $V_{CE(sat)} = 3V$ (Max.) at $I_C = 8A$, $I_B = 2.5A$

Maximum Ratings

Characteristic	Symbol	BUX80	Unit
Collector-Emitter Voltage	V_{CEO}	400	V
Collector-Emitter Voltage ($V_{BE} = 0$)	V_{CES}	800	
Emitter-Base Voltage	V_{EBO}	10	
Collector Current - Continuous -Peak	I_C	10 15	A
Base Current-Continuous	I_B	5	
Total Power Dissipation at $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	100 0.8	W W/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +200	$^\circ C$

Thermal Characteristics

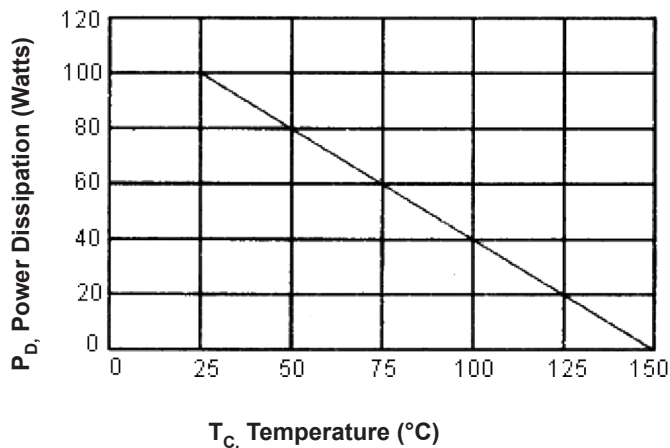
Characteristics	Symbol	Max.	Unit
Thermal Resistance Junction to Case	$R_{\theta JC}$	1.25	$^\circ C/W$

Transistor, NPN

T0-3



Power Derating



Electrical Characteristics (TC = 25°C unless otherwise noted)

Characteristic	Symbol	Min.	Max.	Unit
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Off Characteristics

Collector-Emitter Sustaining Voltage (1) ($I_C = 100\text{mA}$, $I_B = 0$, $L = 25\text{mH}$)	V	400	-	V
Collector Cut off Current ($V_{CE} = 800\text{V}$, $V_{BE} = 0$) ($V_{CE} = 800\text{V}$, $V_{BE} = 0$, $T_C = 125^\circ\text{C}$)	I_{CES}	-	1 3	mA
Emitter Cut off Current ($V_{EB} = 10\text{V}$, $I_C = 0$)	I_{EBO}	-	10	

On Characteristics (1)

DC Current Gain ($I_C = 1.2\text{A}$, $V_{CE} = 5\text{V}$)	h	30 (typical)	-	-
Collector-Emitter Saturation Voltage ($I_C = 5\text{A}$, $I_B = 1\text{mA}$) ($I_C = 8\text{A}$, $I_B = 2.5\text{mA}$)	$V_{CE(sat)}$	-	1.5 3	V
Base-Emitter Saturation Voltage ($I_C = 5.0\text{A}$, $I_B = 1\text{mA}$) ($I_C = 8.0\text{A}$, $I_B = 2.5\text{mA}$)	$V_{BE(sat)}$	-	1.4 1.8	

Switching Characteristics

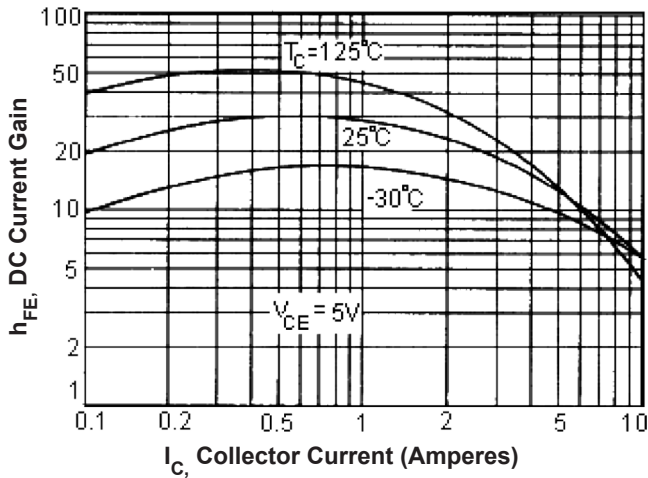
Turn On Time	$V_{CC} = 250\text{V}$, $I_C = 5\text{A}$	t_{on}	-	0.5	μs
Storage Time	$I_{B1} = 1\text{A}$, $I_{B2} = -2\text{A}$	t_s	-	3.5	
Fall Time	-	t_f	-	0.5	

(1) Pulse Test : Pulse Width = 300 μs , Duty Cycle $\leq 2\%$.

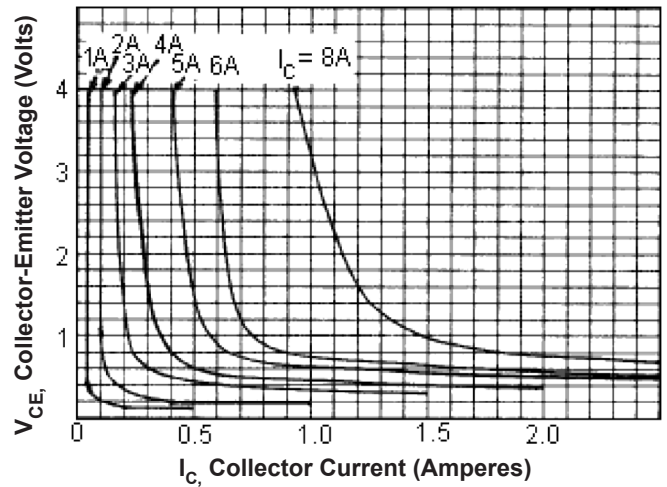
Transistor, NPN T0-3



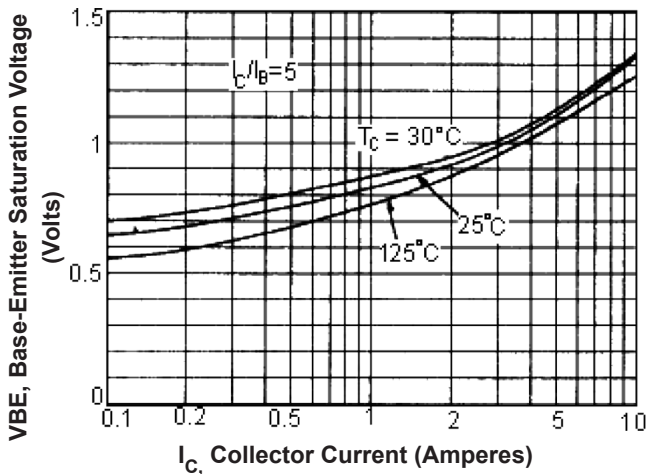
DC Current Gain



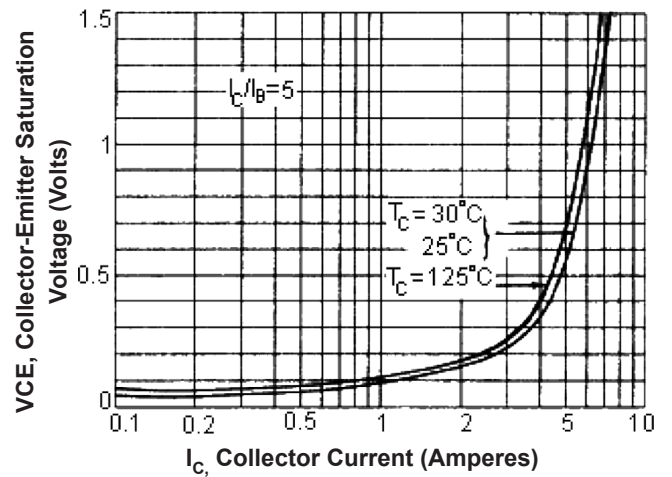
Collector Saturation Region



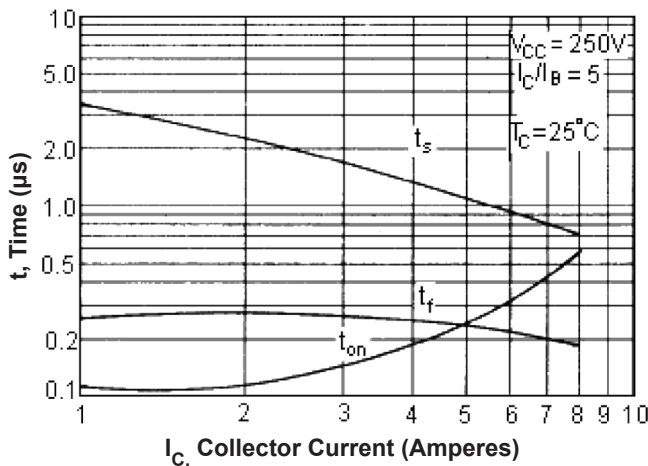
Base-Emmitter Saturation Voltage



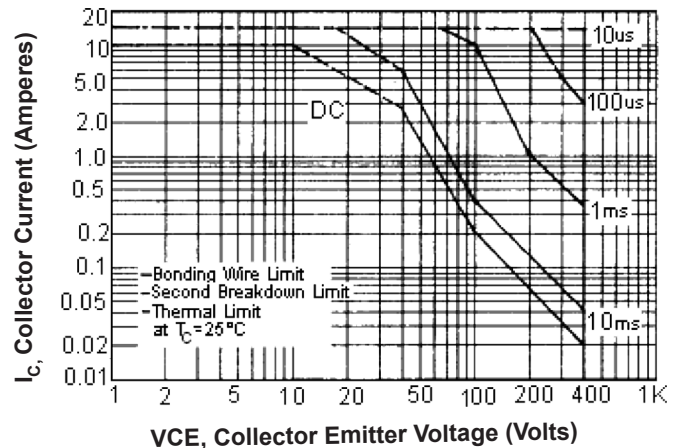
Temperature Coefficients



Switching Time



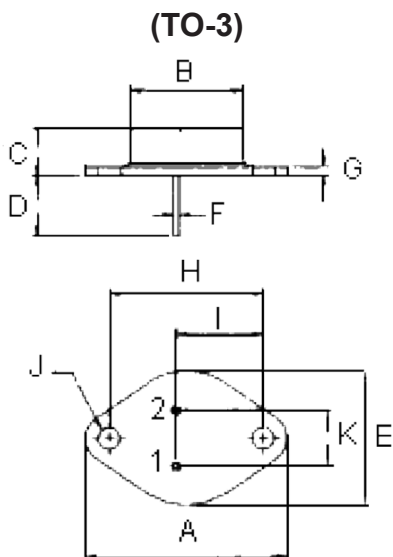
Safe Operating Area



Transistor, NPN TO-3



Dimensions



Dim.	Min.	Max.
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.2	26.67
F	0.92	1.09
G	1.38	1.62
H	29.9	30.4
I	16.64	17.3
J	3.88	4.36
K	10.67	11.18

Dimensions : (Millimetres)

Pin Configuration

- Pin 1. Base
- 2. Emitter
- Collector (Case)

Part Number Table

Description	Part Number
Transistor, NPN, TO-3	BUX80

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