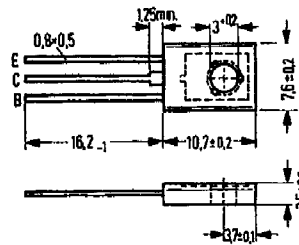


BUX 86
BUX 87

BUX 86 and BUX 87 are NPN silicon epibase power switching transistors in TO 126 plastic package (12 A 3 DIN 41869). They are outstanding for their short switching times and high dielectric strength and are particularly suitable for use in switching power supplies of TV sets. The collector is electrically connected to the metallic mounting area.



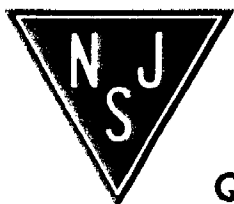
Approx. weight 0.5 g Dimensions in mm

Maximum ratings

Collector-emitter voltage	V_{CES}	800	1000	V
Collector-emitter voltage	V_{CEO}	400	450	V
Collector current	I_C	0.5	0.5	A
Collector peak current ($t_p \leq 2$ ms)	I_{CM}	1.0	1.0	A
Base current	I_B	0.2	0.2	A
Base peak current	I_{BM}	0.3	0.3	A
Negative base peak current at turning off	$-I_{BM}$	0.3	0.3	A
Storage temperature range	T_{stg}	-65 to +150		°C
Junction temperature	T_j	150	150	°C
Total power dissipation ($T_{case} \leq 60^\circ\text{C}$)	P_{tot}	20	20	W

Thermal resistance

Junction to mounting area	R_{thJC}	≤ 4.5	≤ 4.5	K/W
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NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

BUX 86
BUX 87

Static characteristics ($T_{amb} = 25^{\circ}\text{C}$)

Collector-emitter breakdown voltage
($I_C = 100\text{ mA}$; $I_B = 0$; $L = 25\text{ mH}$)

Collector cutoff current
($V_{CES} = 800\text{ V}$)

($V_{CES} = 800\text{ V}$; $T_J = 150^{\circ}\text{C}$)

($V_{CES} = 1000\text{ V}$)

($V_{CES} = 1000\text{ V}$; $T_J = 150^{\circ}\text{C}$)

Emitter cutoff current ($V_{EBO} = 5\text{ V}$)

DC current gain ($V_{CE} = 5\text{ V}$; $I_C = 50\text{ mA}$)

Collector-emitter saturation voltage
($I_C = 100\text{ mA}$; $I_B = 10\text{ mA}$)

($I_C = 200\text{ mA}$; $I_B = 20\text{ mA}$)

Base-emitter saturation voltage

($I_C = 200\text{ mA}$; $I_B = 20\text{ mA}$)

	BUX 86	BUX 87	
$V_{(BR)CEO}$	≥ 400	≥ 450	V
I_{CES}	< 0.1	—	mA
I_{CES}	< 1	—	mA
I_{CES}	—	< 0.1	mA
I_{CES}	—	< 1	mA
I_{EBO}	< 1	< 1	mA
h_{FE}	50	50	—
V_{CEsat}	< 1.5	< 1.5	V
V_{CEsat}	< 3	< 3	V
V_{BEsat}	< 1	< 1	V

Dynamic characteristics ($T_{amb} = 25^{\circ}\text{C}$)

Transition frequency

($V_{CE} = 10\text{ V}$; $I_C = 50\text{ mA}$; $f = 1\text{ MHz}$)

Switching times

($V_{CC} = 250\text{ V}$; $I_C = 200\text{ mA}$; $I_B = 20\text{ mA}$;

$-I_B = 40\text{ mA}$)

Turn-on time

Storage time

Fall time¹⁾

	BUX 86	BUX 87	
f_T	20	20	MHz
t_{on}	0.25 (< 0.5)	0.25 (< 0.5)	μs
t_s	2 (< 3.5)	2 (< 3.5)	μs
t_f	0.4	0.4	μs