

NPN Silicon High Voltage Switching Transistors

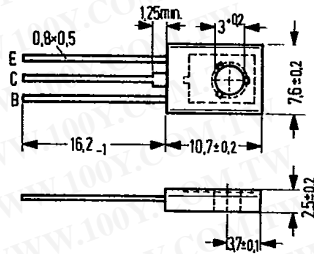
**BUX 86
BUX 87**

SIEMENS AKTIENGESELLSCHAFT

BUX 86 and BUX 87 are NPN silicon epibase power switching transistors in TO 126 plastic package (12 A 3 DIN 41 869). 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.

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Type	Ordering code
BUX 86	Q68000-A3870
BUX 87	Q68000-A5167



Approx. weight 0.5 g Dimensions in mm

Maximum ratings

	BUX 86	BUX 87	
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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Static characteristics ($T_{amb} = 25^{\circ}\text{C}$)

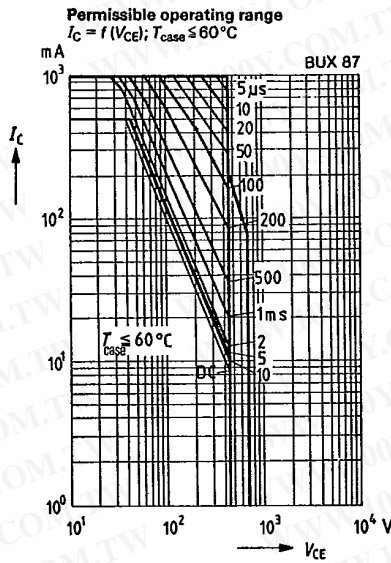
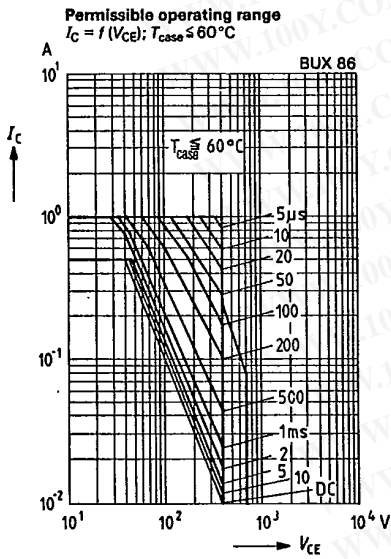
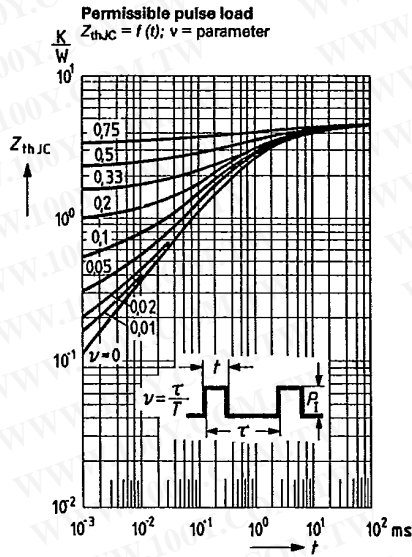
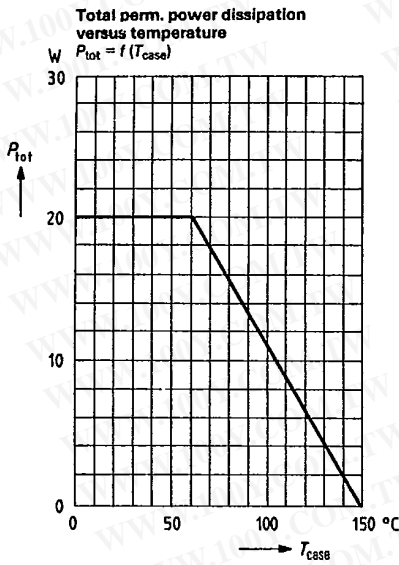
	BUX 86	BUX 87	
Collector-emitter breakdown voltage ($I_C = 100\text{ mA}$; $I_B = 0$; $L = 25\text{ mH}$)	$V_{(BR)CEO} \geq 400$	≥ 450	V
Collector cutoff current ($V_{CES} = 800\text{ V}$)	$I_{CES} < 0.1$	-	mA
($V_{CES} = 800\text{ V}$; $T_j = 150^{\circ}\text{C}$)	$I_{CES} < 1$	-	mA
($V_{CES} = 1000\text{ V}$)	$I_{CES} -$	< 0.1	mA
($V_{CES} = 1000\text{ V}$; $T_j = 150^{\circ}\text{C}$)	$I_{CES} -$	< 1	mA
Emitter cutoff current ($V_{EBO} = 5\text{ V}$)	$I_{EBO} < 1$	< 1	mA
DC current gain ($V_{CE} = 5\text{ V}$; $I_C = 50\text{ mA}$)	$h_{FE} 50$	50	-
Collector-emitter saturation voltage ($I_C = 100\text{ mA}$; $I_B = 10\text{ mA}$)	$V_{CEsat} < 1.5$	< 1.5	V
($I_C = 200\text{ mA}$; $I_B = 20\text{ mA}$)	$V_{CEsat} < 3$	< 3	V
Base-emitter saturation voltage ($I_C = 200\text{ mA}$; $I_B = 20\text{ mA}$)	$V_{BEsat} < 1$	< 1	V

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

	BUX 86	BUX 87	
Transition frequency ($V_{CE} = 10\text{ V}$; $I_C = 50\text{ mA}$; $f = 1\text{ MHz}$)	$f_T 20$	20	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	$t_{on} 0.25 (< 0.5)$	$0.25 (< 0.5)$	μs
Storage time	$t_s 2 (< 3.5)$	$2 (< 3.5)$	μs
Fall time ¹⁾	$t_f 0.4$	0.4	μs

1) at $T_{case} = 95^{\circ}\text{C}$ is $t_f \leq 1.4\ \mu\text{s}$

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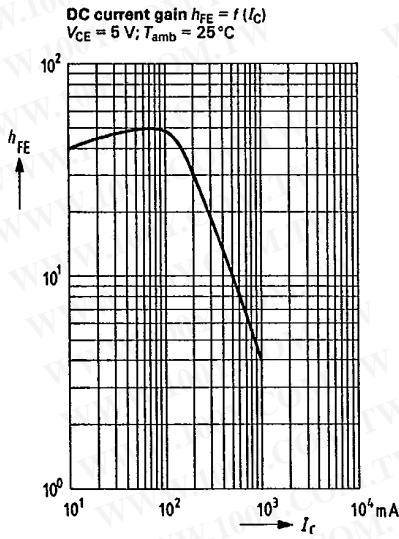
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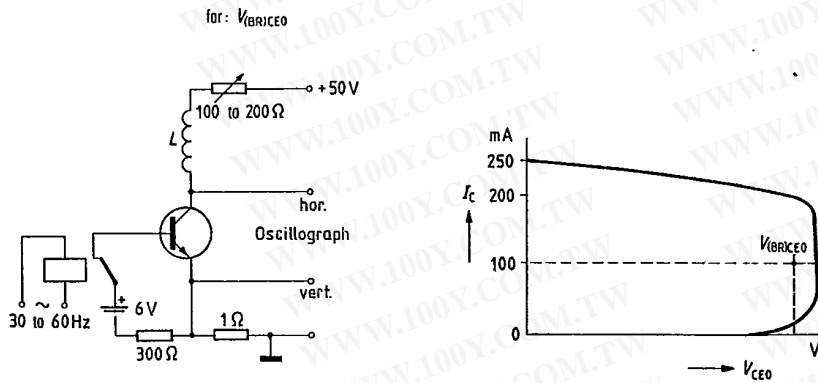
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Test circuit for breakdown voltage $V_{(BR)CEO}$



2237

F-06

921

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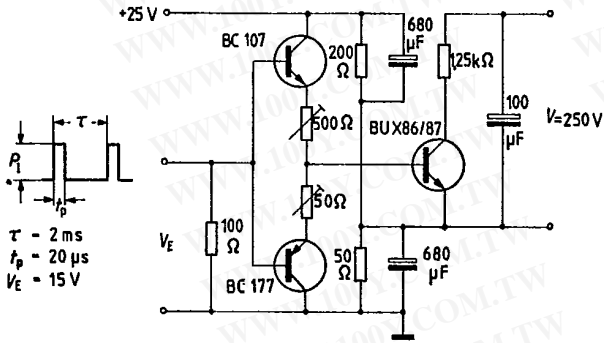
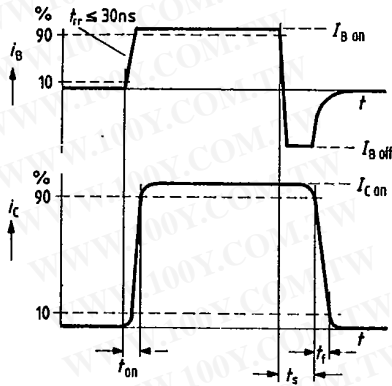
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Test circuit for switching times



922 2238

F-07