

25C D ■ 8235605 0004342 7 ■ SIEG

T-33-19

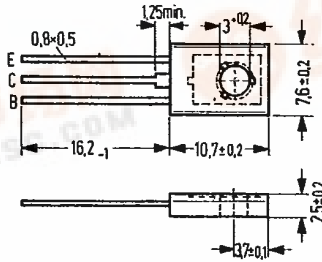
PNP Silicon Planar Transistors

BD 287
BD 288

SIEMENS AKTIENGESELLSCHAFT 04342 D

BD 287 and BD 288 are epitaxial planar transistors in TO 126 plastic package (12 A 3 DIN 41869, sheet 4). The collector is electrically connected to the metallic mounting area. The transistors are particularly designed for switching applications in flash devices.

Type	Ordering code
BD 287	Q62702-D900
BD 288	Q62702-D901
Spring washer	
A3 DIN 137	Q62902-B63
Mica washer	Q62902-B62



Approx. weight 0.5 g Dimensions in mm
Transistor fixing with M3 screw. Starting torque max. 0.8 Nm. Washer or spring washer should be used.

Maximum ratings ($T_{amb} = 25^\circ\text{C}$)

	BD 287	BD 288		
Collector-emitter voltage	$-V_{CEO}$	25	45	V
Collector-emitter voltage	$-V_{CES}$	30	45	V
Collector-base voltage	$-V_{CBO}$	30	45	V
Emitter-base voltage	$-V_{EBO}$	5	5	V
Collector current	$-I_C$	12	12	A
Collector peak current ($t \leq 10$ ms)	$-I_{CM}$	15	15	A
Emitter peak current	I_{EM}	15	15	A
Base current	$-I_B$	2	2	A
Base peak current	$-I_{BM}$	5	5	A
Junction temperature	T_j	150	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-50 to +150		$^\circ\text{C}$
Total power dissipation ($T_{case} = 25^\circ\text{C}$)	P_{tot}	36	36	W

Thermal resistance

Junction to ambient air	R_{thJA}	≤ 100	≤ 100	K/W
Junction to mounting area	R_{thJC}	$\leq 3,5$	$\leq 3,5$	K/W

388 1765 G-10

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 BD 287
 BD 288

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

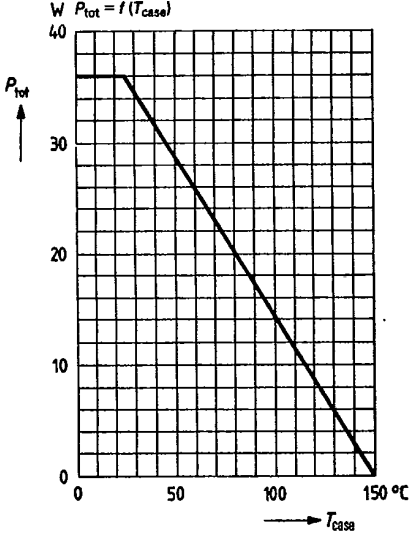
		BD 287	BD 288	
Collector cutoff current ($-V_{CE} = 30\text{ V}$)	$-I_{CES}$	≤ 1	≤ 1	μA
Collector cutoff current ($-V_{CE} = 30\text{ V}; T_{amb} = 125^\circ\text{C}$)	$-I_{CES}$	≤ 100	≤ 100	μA
DC current gain ($-I_C = 12\text{ A}; -V_{CE} = 0.7\text{ V}$)	h_{FE}	≥ 25	≥ 25	-
DC current gain ($-I_C = 0.1\text{ A}; -V_{CE} = 0.7\text{ V}$)	h_{FE}	200	200	-
Base-emitter forward voltage ($-I_C = 12\text{ A}; -V_{CE} = 0.7\text{ V}$)	$-V_{BE}$	< 1.7	< 1.7	V
Base-emitter forward voltage ($-I_C = 0.1\text{ A}; -V_{CE} = 0.7\text{ V}$)	$-V_{BE}$	< 0.8	< 0.8	V

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

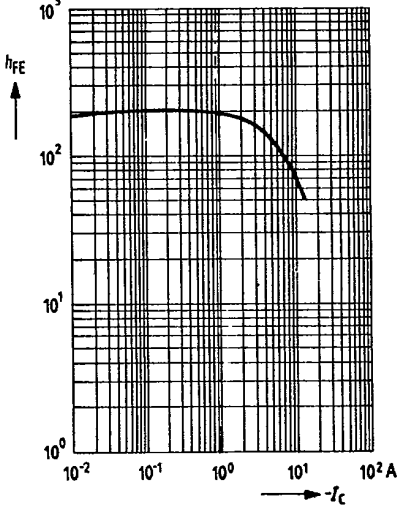
Transition frequency ($-V_{CE} = 10\text{ V}; -I_C = 0.2\text{ A}$)	f_T	≥ 50	≥ 50	MHz
Collector-base capacitance ($-V_{CB} = 10\text{ V}$)	C_{CB}	130	130	pF
Switching times ($-I_C = 2\text{ A}; I_{B1} \text{ approx. } I_{B2} \text{ approx. } 0.2\text{ A}$)	t_{on}	< 0.5	< 0.5	μs
	t_{off}	< 2	< 2	μs

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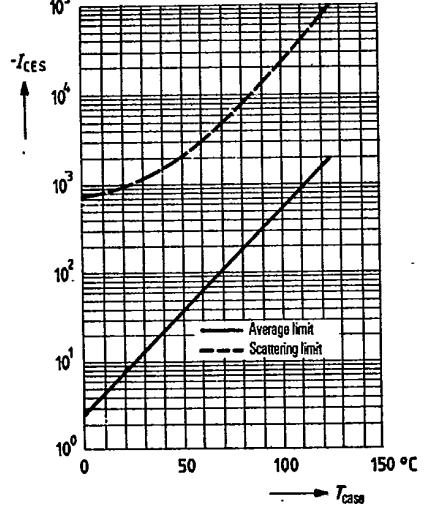
Total perm. power dissipation versus temperature



DC current gain $h_{FE} = f(I_C)$
 $-V_{CE} = 0.7V; T_{case} = 25^\circ C$



Collector cutoff current versus temperature $I_{CES} = f(T_{case})$



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