

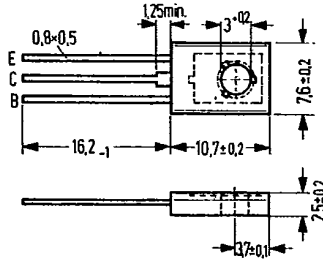
PNP Silicon Planar Transistors

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 <sub>CEO</sub> 25	45	V
Collector-emitter voltage	-V <sub>CES</sub> 30	45	V
Collector-base voltage	-V <sub>CBO</sub> 30	45	V
Emitter-base voltage	-V <sub>EBO</sub> 5	5	V
Collector current	-I <sub>C</sub> 12	12	A
Collector peak current ( $t \leq 10$ ms)	-I <sub>CM</sub> 15	15	A
Emitter peak current	I <sub>EM</sub> 15	15	A
Base current	-I <sub>B</sub> 2	2	A
Base peak current	-I <sub>BM</sub> 5	5	A
Junction temperature	T <sub>j</sub> 150	150	°C
Storage temperature range	T <sub>stg</sub> -50 to +150		°C
Total power dissipation ( $T_{case} = 25^\circ\text{C}$ )	P <sub>tot</sub> 36	36	W

Thermal resistance

Junction to ambient air	R <sub>thJA</sub> ≤100	≤100	K/W
Junction to mounting area	R <sub>thJC</sub> ≤3,5	≤3,5	K/W

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

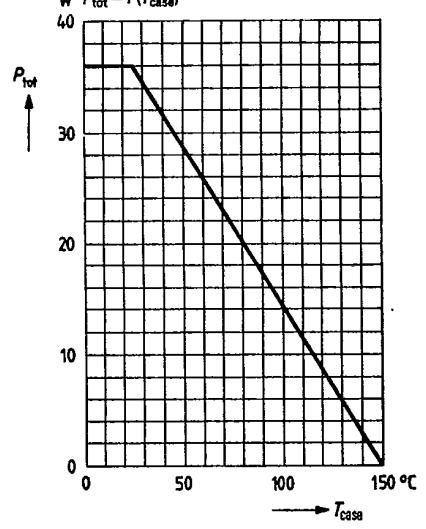
	BD 287	BD 288	
Collector cutoff current ( $-V_{CE} = 30\text{ V}$ )	$-I_{CES} \leq 1$	$\leq 1$	$\mu\text{A}$
Collector cutoff current ( $-V_{CE} = 30\text{ V}; T_{amb} = 125^{\circ}\text{C}$ )	$-I_{CES} \leq 100$	$\leq 100$	$\mu\text{A}$
DC current gain ( $-I_C = 12\text{ A}; -V_{CE} = 0.7\text{ V}$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

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

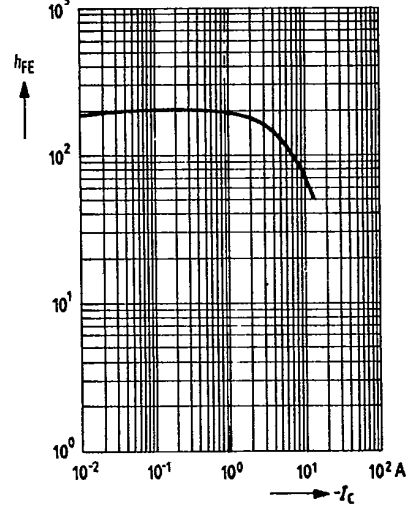
Transition frequency ( $-V_{CE} = 10\text{ V}; -I_C = 0.2\text{ A}$ )	$f_T \geq 50$	$\geq 50$	$\text{MHz}$
Collector-base capacitance ( $-V_{CB} = 10\text{ V}$ )	$C_{CB} 130$	$130$	$\text{pF}$
Switching times ( $-I_C = 2\text{ A}; I_{B1} \text{ approx. } I_{B2} \text{ approx. } 0.2\text{ A}$ )	$t_{on}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

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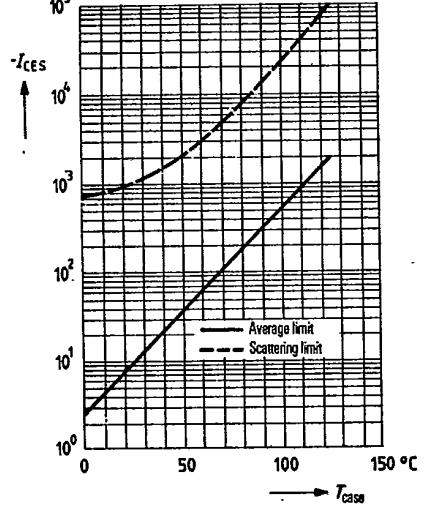
Total perm. power dissipation versus temperature  
 $P_{tot} = f(T_{case})$



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



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



390

1767

G-12

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