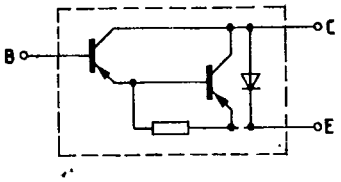
PNP Silicon Planar Darlington Transistors

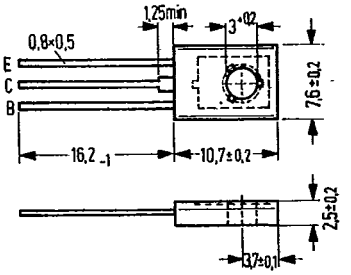
BD 876
BD 878
BD 880

SIEMENS AKTIENGESELLSCHAF 423 D

BD 876, BD 878, and BD 880 are epitaxial PNP silicon planar darlington transistors in TO 126 plastic package (12 A 3 DIN 41 869, sheet 4). These darlington transistors are designed for relay drivers as well as for general AF applications. BD 875, BD 877, and BD 879 are provided as complementary transistors.

Type	Ordering code
BD 876	Q62702-D908
BD 878	Q62702-D907
BD 880	Q62702-D906
Spring washer A 3 DIN 137	Q62902-B63
Mica washer	Q62902-B62





Approx. weight 0.5 g. Dimensions in mm

Transistor fixing with M 3 screw; starting torque max. 0.8 Nm; washer or spring washer should be used.

Maximum ratings (T_{amb} = 25 °C)

		BD 876	BD 878	BD 880	
Collector-emitter voltage	$-V_{CEO}$	45	60	80	V
Collector-base voltage	$-V_{CBO}$	60	80	100	V
Emitter-base voltage	$-V_{EBO}$	5	5	5	V
Collector current	$-I_C$	1	1	1	A
Collector peak current	$-I_{CM}$	2	2	2	A
Base current	$-I_B$	0.1	0.1	0.1	A
Junction temperature	T_j	150	150	150	°C
Storage temperature range	T_{stg}		−65 to +150		°C
Total power dissipation ($T_{amb} \leqq 25$ °C)	P_{tot}	1.25	1.25	1.25	W
($T_{case} \leqq 60$ °C)	P_{tot}	9	9	9	W

Thermal resistance

Junction to ambient air	R_{thJA}	<100	<100	<100	K/W
Junction to case	R_{thJC}	<10	<10	<10	K/W

Static characteristics (T_{amb} = 25 °C)		BD 876	BD 878	BD 880	
Collector cutoff current ($V_{CB} = V_{CBmax}$)	$-I_{CBO}$	<100	<100	<100	nA
Collector cutoff current (V_{CE} = 0.5 V_{CEmax}	$-I_{CEO}$	<500	<500	<500	nA
Emitter cutoff current ($-V_{EB}$ = 4 V)	$-I_{EBO}$	<100	<100	<100	nA
Collector-emitter breakdown voltage ($-I_C$ = 50 mA)	$-V_{(BR)CEO}$	>45	>60	>80	V
Collector-base breakdown voltage ($-I_C$ = 100 µA)	$-V_{(BR)CBO}$	>60	>80	>100	V
Emitter-base breakdown voltage (I_E = 100 µA)	$-V_{(BR)EBO}$	>5	>5	>5	V
DC current gain ($-I_C$ = 150 mA; $-V_{CE}$ = 10 V)	h_{FE}	>1000	>1000	>1000	–
($-I_C$ = 0.5 A; $-V_{CE}$ = 10 V)	h_{FE}	>2000	>2000	>2000	–
Collecor-emitter saturation voltage ($-I_C$ = 0.5 A; $-I_B$ = 0.5 mA)	$-V_{CEsat}$	<1.3	<1.3	<1.3	V
($-I_C$ = 1 A; $-I_B$ = 1 mA)	$-V_{CEsat}$	<1.8	<1.8	<1.8	V
Base-emitter saturation voltage ($-I_C$ = 1 A; $-I_B$ = 1 mA)	$-V_{BEsat}$	<2.2	<2.2	<2.2	V

Dynamic characteristics (T_{amb} = 25 °C)					
Transition frequency ($-I_C$ = 0.5 A; $-V_{CE}$ = 5 V; f = 35 MHz)	f_T	200	200	200	MHz