

## PNP Silicon Planar Darlington Transistors

BD 876

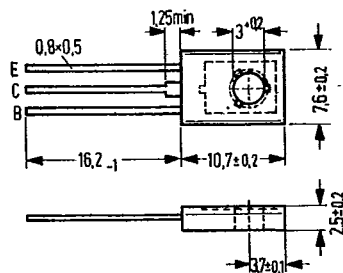
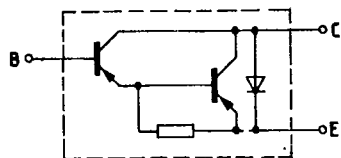
BD 878

BD 880

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

Collector-emitter voltage  
Collector-base voltage  
Emitter-base voltage  
Collector current  
Collector peak current  
Base current  
Junction temperature  
Storage temperature range  
Total power dissipation  
( $T_{amb} \leq 25^{\circ}\text{C}$ )  
( $T_{case} \leq 60^{\circ}\text{C}$ )

	BD 876	BD 878	BD 880	
$-V_{CEO}$	45	60	80	V
$-V_{CBO}$	60	80	100	V
$-V_{EBO}$	5	5	5	V
$-I_C$	1	1	1	A
$-I_{CM}$	2	2	2	A
$-I_B$	0.1	0.1	0.1	A
$T_j$	150	150	150	$^{\circ}\text{C}$
$T_{stg}$	-65 to +150			$^{\circ}\text{C}$
$P_{tot}$	1.25	1.25	1.25	W
$P_{tot}$	9	9	9	W

## Thermal resistance

Junction to ambient air  
Junction to case

$R_{thJA}$	<100	<100	<100	K/W
$R_{thJC}$	<10	<10	<10	K/W

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

		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 ( $-V_{EB} = 4 \text{ V}$ )	$-I_{EBO}$	<100	<100	<100	nA
Collector-emitter breakdown voltage ( $-I_C = 50 \text{ mA}$ )	$-V_{(BR)CEO}$	>45	>60	>80	V
Collector-base breakdown voltage ( $-I_C = 100 \mu\text{A}$ )	$-V_{(BR)CBO}$	>60	>80	>100	V
Emitter-base breakdown voltage ( $I_E = 100 \mu\text{A}$ )	$-V_{(BR)EBO}$	>5	>5	>5	V
DC current gain ( $-I_C = 150 \text{ mA}$ ; $-V_{CE} = 10 \text{ V}$ )	$h_{FE}$	>1000	>1000	>1000	—
( $-I_C = 0.5 \text{ A}$ ; $-V_{CE} = 10 \text{ V}$ )	$h_{FE}$	>2000	>2000	>2000	—
Collector-emitter saturation voltage ( $-I_C = 0.5 \text{ A}$ ; $-I_B = 0.5 \text{ mA}$ )	$-V_{CEsat}$	<1.3	<1.3	<1.3	V
( $-I_C = 1 \text{ A}$ ; $-I_B = 1 \text{ mA}$ )	$-V_{CEsat}$	<1.8	<1.8	<1.8	V
Base-emitter saturation voltage ( $-I_C = 1 \text{ A}$ ; $-I_B = 1 \text{ mA}$ )	$-V_{BEsat}$	<2.2	<2.2	<2.2	V

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

Transition frequency ( $-I_C = 0.5 \text{ A}$ ; $-V_{CE} = 5 \text{ V}$ ; $f = 35 \text{ MHz}$ )	$f_T$	200	200	200	MHz
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