

NPN Silicon Darlington Transistors

BD 975

BD 977

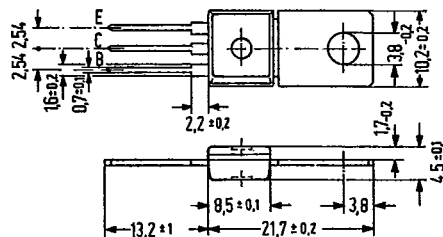
BD 979

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BD 975, BD 977, and BD 979 are epitaxial NPN silicon planar darlington transistors in plastic package similar to TO 202. These darlington transistors are designed for relay drivers as well as for general AF applications.

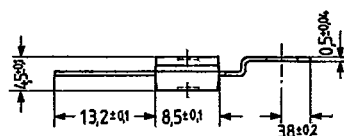
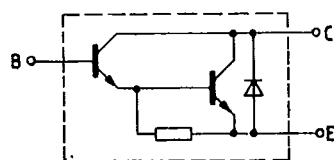
BD 976, BD 978, and BD 980 are provided as complementary transistors.

Type	Ordering code
BD 975	Q62702-D962
BD 977	Q62702-D964
BD 979	Q62702-D966



Approx. weight 15 g.

Dimensions in mm



Available upon request also with bent fixing plate.

Maximum ratings

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

	BD 975	BD 977	BD 979	
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_{stg}	-65 to +150			$^{\circ}\text{C}$
T_J	150	150	150	$^{\circ}\text{C}$
P_{tot}	1.6	1.6	1.6	W
P_{tot}	3.6	3.6	3.6	W

Thermal resistance

Junction to ambient air
 Junction to case

R_{thJA}	78	78	78	K/W
R_{thJC}	25	25	25	K/W

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Static characteristics ($T_{amb} = 25^{\circ}\text{C}$)		BD 975	BD 977	BD 979	
Collector cutoff current ($V_{CBO} = V_{CBmax}$)	I_{CBO}	<100	<100	<100	nA
Collector cutoff current ($V_{CEO} = 0.5 V_{CEmax}$)	I_{CEO}	<500	<500	<500	nA
Emitter cutoff current ($V_{EBO} = 4 \text{ V}$)	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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