

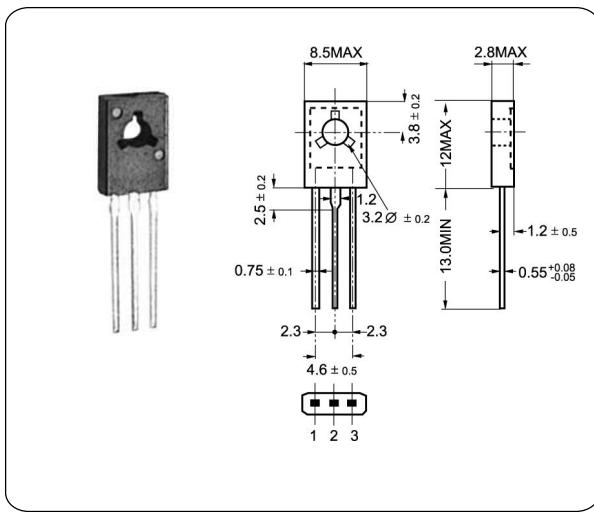


COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

BD681/BD682

DESCRIPTION

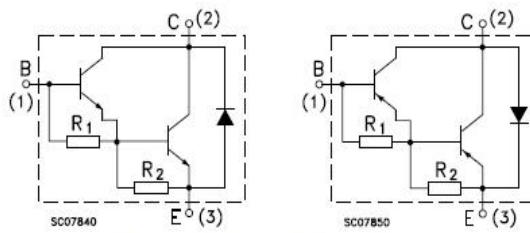
The BD681, are silicon epitaxial-base NPN power transistors in monolithic Darlington configuration mounted in Jedec TO-126 plastic package. They are intended for use in medium power linear and switching applications. The complementary PNP types are BD682, respectively.



ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	100	V
Collector-Emitter Voltage	V _{CEO}	100	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	4.0	A
Base Current	I _B	0.1	A
Total Dissipation at	P _{tot}	40	W
Max. Operating Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~150	°C

INTERNAL SCHEMATIC DIAGRAM



ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I _{CEO}	V _{CE} =100V, I _B =0	—	—	0.2	mA
Collector Cut-off Current	I _{CBO}	V _{CB} =100V, I _E =0	—	—	0.5	mA
Emitter Cut-off Current	I _{EBO}	V _{EB} =5V, I _C =0	—	—	2.0	mA
Collector-Emitter Sustaining Voltage	V _{CEO}	I _C =50mA, I _B =0	100	—	—	V
DC Current Gain	h _{FE(1)}	V _{CE} =3V, I _C =1.5A	750	—	—	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =1.5A, I _B =30mA	—	—	2.5	V
Base-Emitter Voltage	V _{BE}	V _{CE} =3V, I _C =1.5A	—	—	2.5	V