

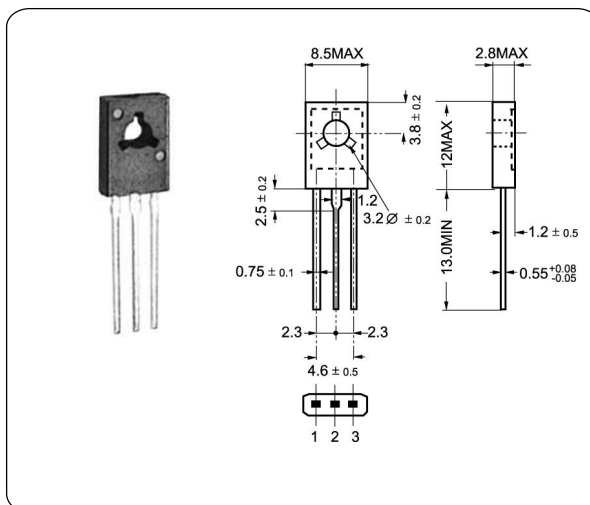


COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

BD681/BD682

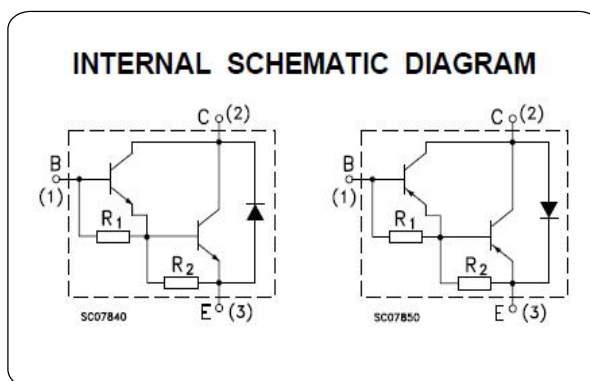
DESCRIPTION

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



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