



Product specification

Complementary Silicon Power Transistors

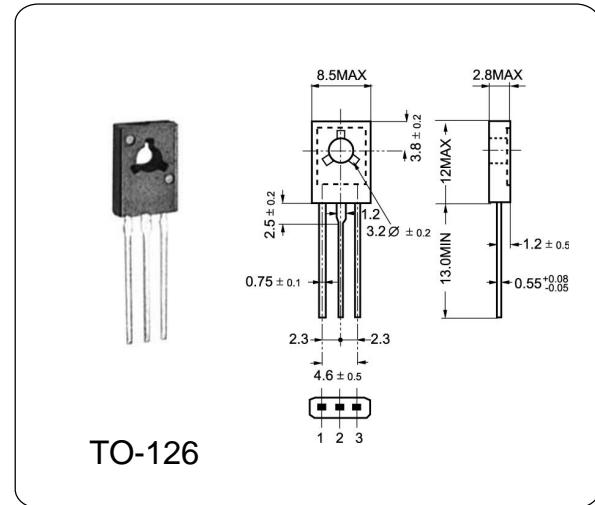
BD139 / BD140

DESCRIPTION

It is intended for use in power amplifier and switching applications.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	I	Value	Unit
Collector-Base Voltage	V _{CBO}	80	V
Collector-Emitter Voltage	V _{CEO}	80	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	1.5	A
Base Current	I _B	0.5	A
Total Dissipation at	P _{tot}	12.5	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 _{CB} =80V, I _E =0	—	—	10	uA
Emitter Cut-off Current	I _{EBO}	V _{EB} =5V, I _C =0	—	—	10	uA
Collector-Emitter Sustaining Voltage	V _{CEO}	I _C =30mA, I _B =0	80	—	—	V
DC Current Gain	h _{FE(1)}	V _{CE} =2V, I _C =0.5A	25	—	—	
	h _{FE(2)}	V _{CE} =2V, I _C =150mA	40	—	250	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =0.5A, I _B =50mA	—	—	0.5	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	V _{CE} =2V, I _C =0.5A	—	—	1.0	V
Current Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =500mA	3	—	—	MHz