DESCRIPTION

The BD135, BD137 and BD139 are available in TO-126 (SOT32) Package.

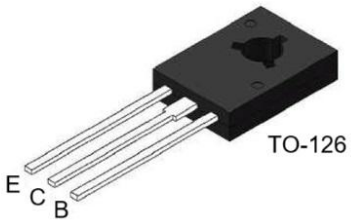
FEATURE

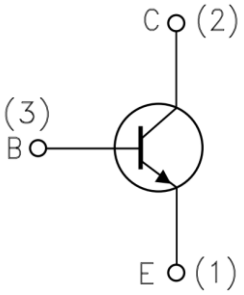
- Complementary with BD136, BD138 and BD140
- Available in TO-126 (SOT32) Package

ORDERING INFORMATION

Package Type	Part Number
TO-126 (SOT32)	BD135-6
	BD135-10
	BD135-16
	BD137-6
	BD137-10
	BD137-16
	BD139-6
	BD139-10
	BD139-16
Note	SPQ: 500pcs/Bag
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION





NPN

PIN#	DESCRIPTION
1	EMITTER
2	COLLECTOR
3	BASE

h_{FE} TABLE

Range	BD135-6 BD137-6 BD139-6	BD135-10 BD137-10 BD139-10	BD135-16 BD137-16 BD139-16
h_{FE}	40~100	63~160	100~250

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified

BV_{CBO}, Collector-Base Voltage	BD135	45V
	BD137	60V
	BD139	80V
BV_{CEO}, Collector-Emitter Voltage	BD135	45V
	BD137	60V
	BD139	80V
BV_{EBO}, Emitter-Base Voltage		5V
I_C, Collector Current		1.5A
P_C, Collector Power Dissipation		12.5W
T_{STG}, Storage Temperature		-55℃ ~ + 150℃
T_J, Junction Temperature		+150℃

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

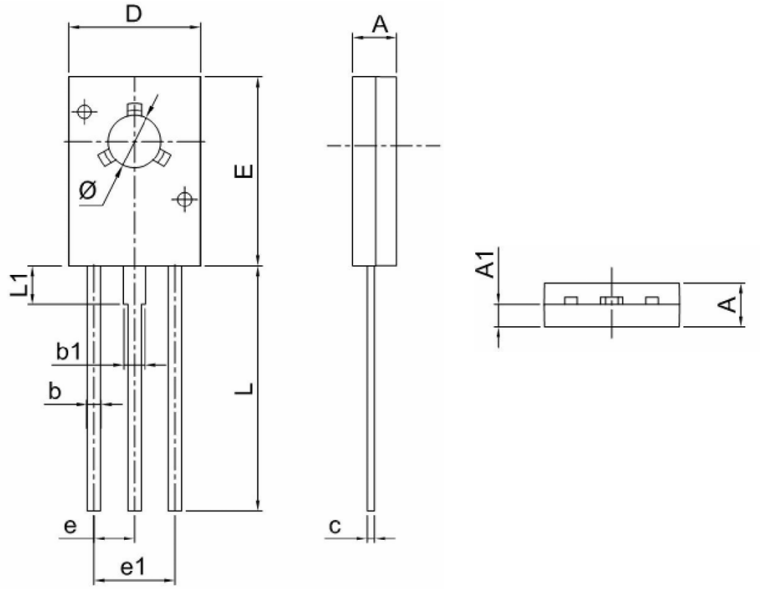
ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BD135	BV_{CBO}	I_C=100μA, I_E=0	45	-	-	V
	BD137			60	-	-	
	BD139			80	-	-	
Collector-Emitter Breakdown Voltage	BD135	BV_{CEO}	I_C=10mA, I_B=0	45	-	-	V
	BD137			60	-	-	
	BD139			80	-	-	
Emitter-Base Breakdown Voltage		BV_{EBO}	I_E=100μA, I_C=0	5		-	V
Collector Cut-Off Current	BD135	I_{CBO}	I_E=0, V_{CB}= 30V	-	-	100	μA
	BD137			-	-	100	
	BD139			-	-	100	
Emitter Cut-Off Current		I_{EBO}	I_C=0, V_{EB}=5V	-	-	10	μA
DC Current Gain	All Device	h_{FE}	I_C=5mA, V_{CE}=2V	25	-	-	-
	All Device		I_C=0.5A, V_{CE}=2V	25	-	-	
	BD135 BD137		I_C=150mA, V_{CE}=2V	40	-	250	
	BD139			40	-	160	
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	I_B=50mA, I_C=500mA	-	-	0.5	V
Base-Emitter Saturation Voltage		$V_{BE(ON)}$	I_C=0.5A, V_{CE}=2V	-	-	1.0	V

PACKAGE INFORMATION

Dimension in TO-126 (SOT32) Package (Unit: mm)



DIM	MILLIMETERS	
	MIN	MAX
A	2.400	2.800
A1	1.000	1.400
b	0.660	0.860
b1	1.170	1.370
c	0.400	0.600
D	7.300	7.700
E	10.600	11.000
e	2.250	2.330
e1	4.500	4.660
L	14.000	15.000
L1	1.900	2.500
Φ	3.100	3.300

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