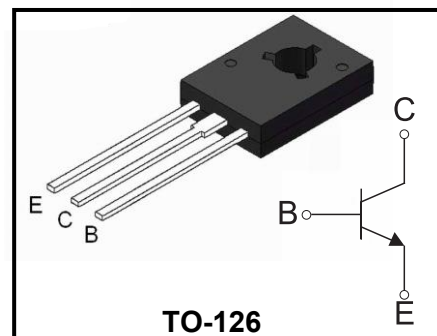


Plastic-Encapsulate Transistors
TRANSISTOR (NPN)

Medium Power Linear and Switching Applications
♦Complement to BD136, BD138 and BD140 respectively



Absolute Maximum Ratings (Ta=25°C)

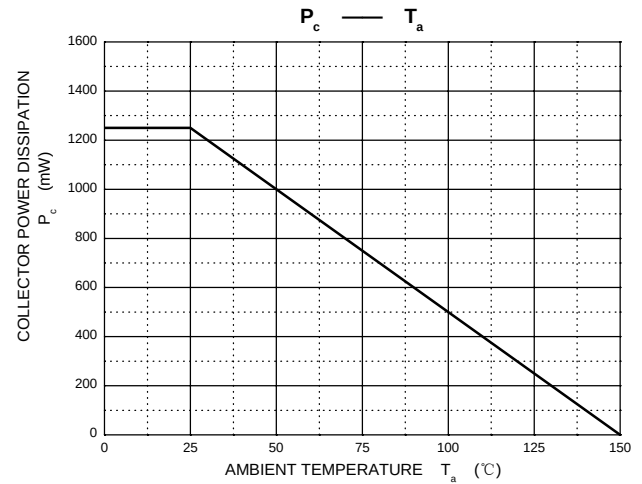
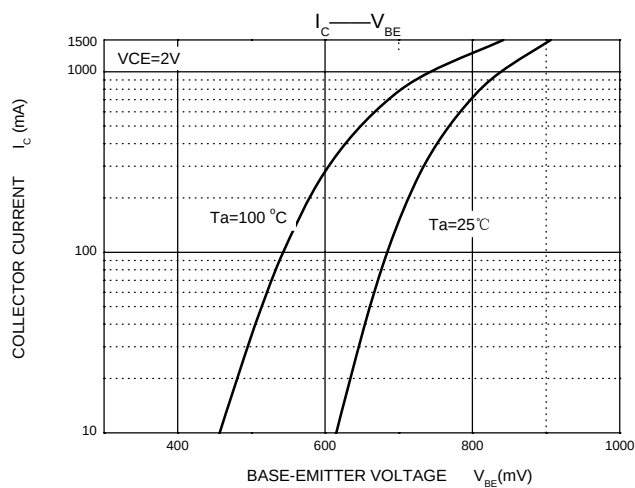
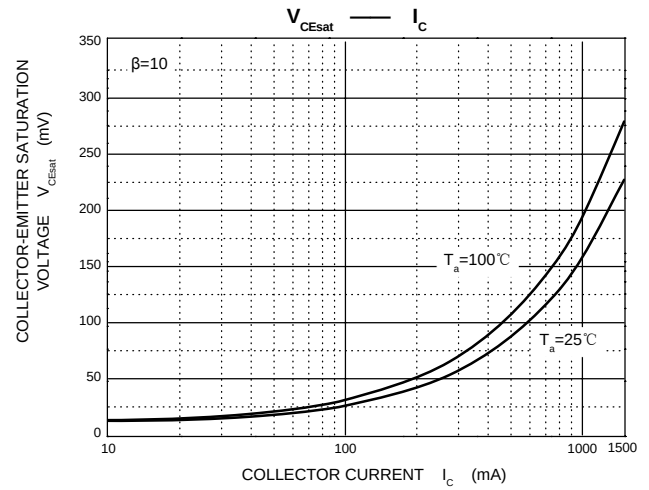
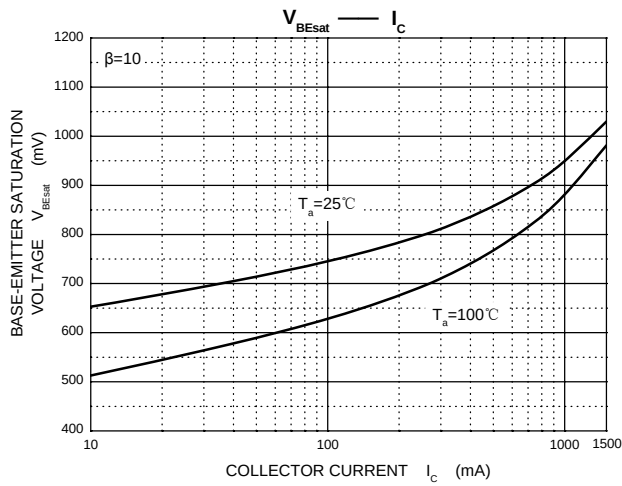
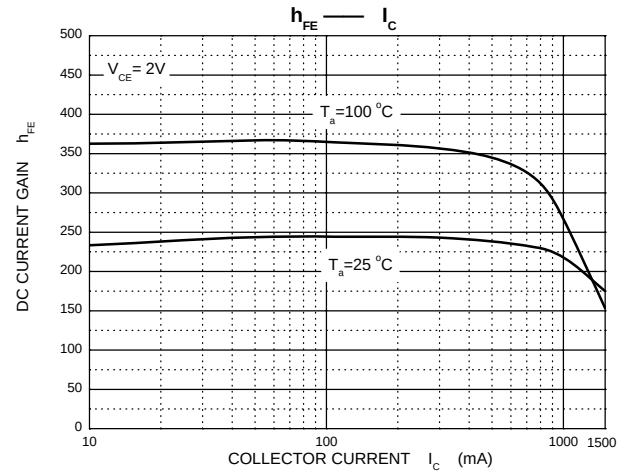
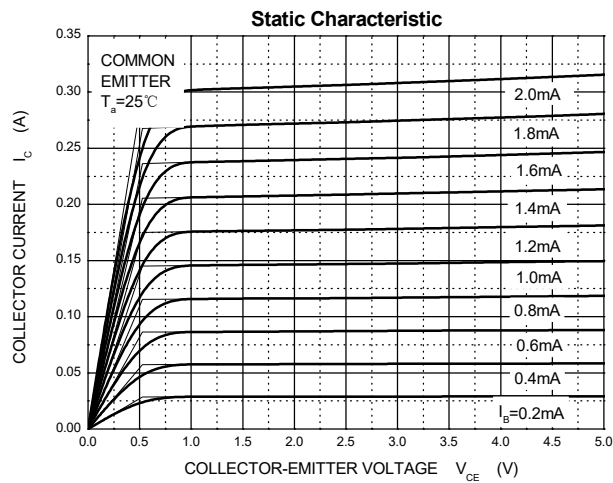
Parameter	Symbol	Value			Unit
		BD135	BD137	BD139	
Collector-Base Voltage	BV_{CBO}	45	60	80	V
Collector-Emitter Voltage	BV_{CEO}	45	60	80	V
Emitter-Base Voltage	BV_{EBO}	5			V
Collector Current	I_C	1.5			A
Collector Power Dissipation	P_C	12.5			W
Junction Temperature	T_j	150			°C
Storage Temperature	T_{stg}	-55~150			°C

Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	Value			Unit
				Min	Typ	Max	
Collector-base breakdown voltage	BD135 BD137 BD139	BV_{CBO}	$I_C = 100\mu A, I_E = 0$	45 60 80			V
Collector-emitter breakdown voltage	BD135 BD137 BD139	BV_{CEO}	$I_C = 10mA, I_B = 0$	45 60 80			V
Emitter-base breakdown voltage		BV_{EBO}	$I_E = 100\mu A, I_C = 0$	5			V
Collector cut-off current	BD135 BD137 BD139	I_{CBO}	$V_{CB} = 30V, I_E = 0$			100	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = 5V, I_C = 0$			10	μA
DC current gain	ALL DEVICE ALL DEVICE BD135 BD137, BD139	h_{FE}	$V_{CE} = 2V, I_C = 5mA$ $V_{CE} = 2V, I_C = 0.5A$ $V_{CE} = 2V, I_C = 150mA$	25 25 40 40		250 160	
Collector-emitter saturation voltage		$V_{CE(SAT)}$	$I_C = 500mA, I_B = 50mA$			0.5	V
Base -emitter saturation voltage		$V_{BE(ON)}$	$V_{CE} = 2V, I_C = 0.5A$			1	V

h_{FE} Classification

Classification	BD135-6/BD137-6/BD139-6	BD135-10/BD137-10/BD139-10	BD135-16/BD137-16/BD139-16
Range	40-100	63-160	100-250

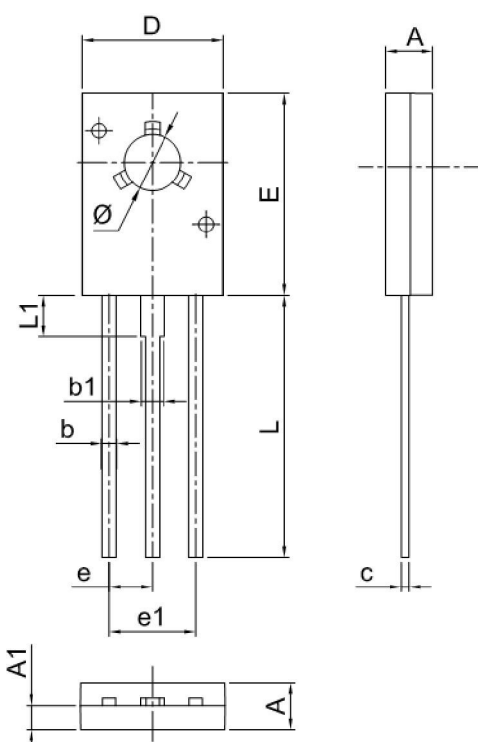


Ordering information

Package	Packing Description	Base Quantity
TO-126	Bulk	500pcs/Bag

Package Dimensions

TO-126

	Symbol	Millimeter		Inches	
		Min.	Max.	Min.	Max.
	A	2.40	2.80	0.094	0.110
	A1	1.00	1.40	0.039	0.055
	b	0.66	0.86	0.026	0.034
	b1	1.17	1.37	0.046	0.054
	c	0.40	0.60	0.016	0.024
	D	7.30	7.70	0.287	0.303
	E	10.60	11.00	0.417	0.433
	e	2.25	2.33	0.089	0.092
	e1	4.50	4.66	0.177	0.183
	L	14.00	15.00	0.551	0.591
	L1	1.90	2.50	0.075	0.098
	Φ	3.10	3.30	0.122	0.130

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