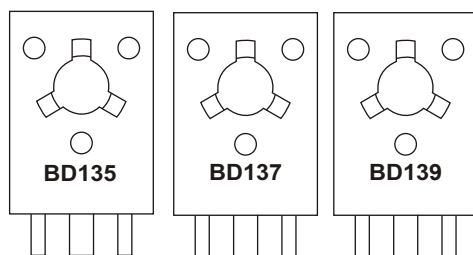


BD135 / BD137 / BD139 TRANSISTOR (NPN)

FEATURES

- High Current
- Complement To BD136, BD138 And BD140

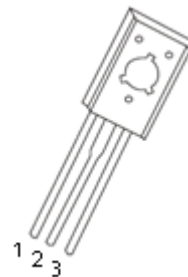
MARKING



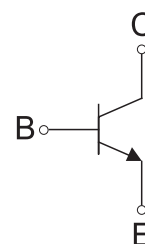
BD135, BD137, BD139 = Device code

TO - 126

1. EMITTER
2. COLLECTOR
3. BASE



Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
BD135	TO-126	Bulk	200pcs/Bag
BD137	TO-126	Bulk	200pcs/Bag
BD139	TO-126	Bulk	200pcs/Bag
BD135-TU	TO-126	Tube	60pcs/Tube
BD137-TU	TO-126	Tube	60pcs/Tube
BD139-TU	TO-126	Tube	60pcs/Tube

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	BD135	45
		BD137	60
		BD139	80
V_{CEO}	Collector-Emitter Voltage	BD135	45
		BD137	60
		BD139	80
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1.5	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	100	$^{\circ}\text{C/W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

T_a=25 °C unless otherwise specified

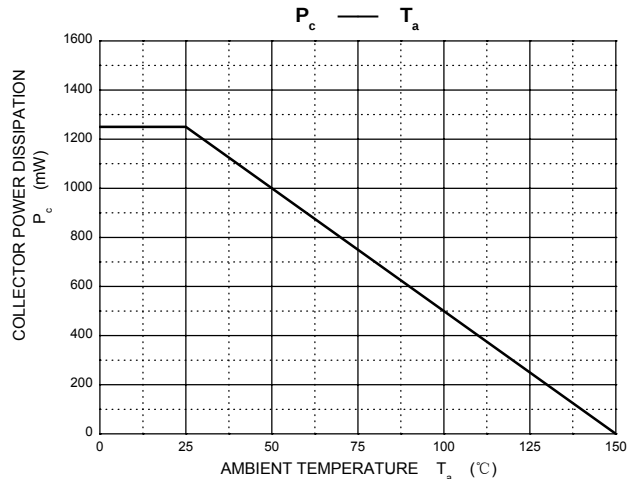
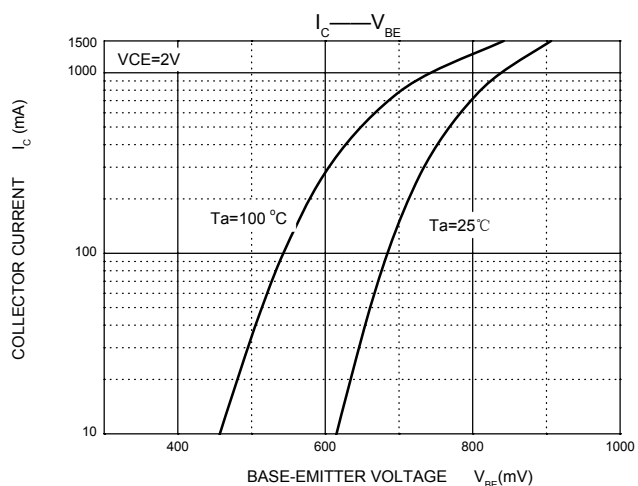
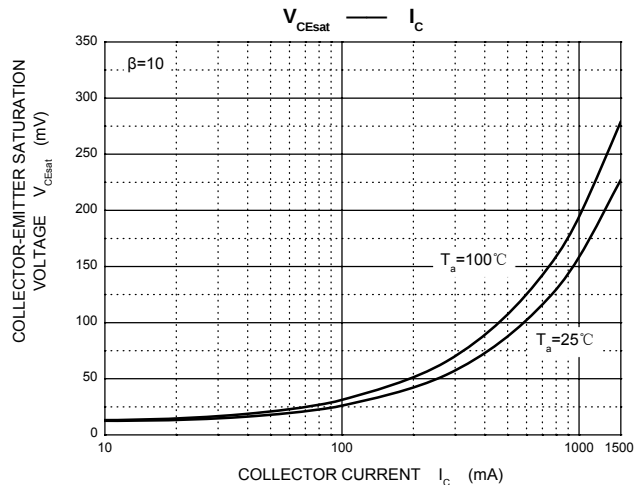
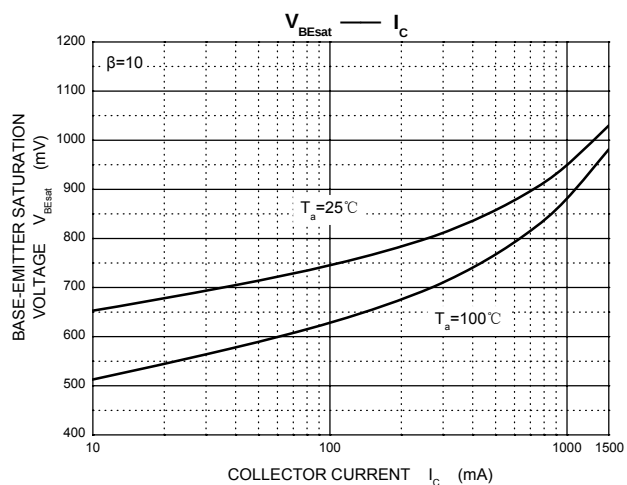
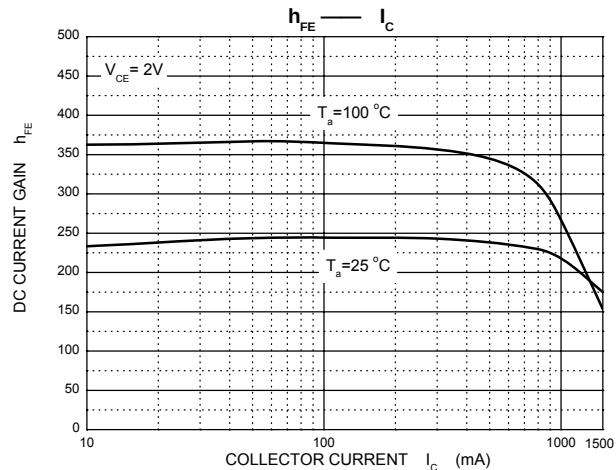
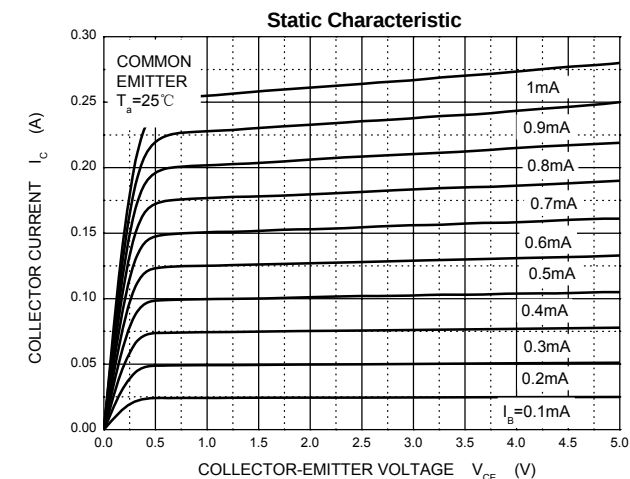
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage BD135 BD137 BD139	V _{(BR)CBO}	I _C = 0.1mA, I _E =0	45 60 80			V
Collector-emitter sustaining voltage BD135 BD137 BD139	V _{CEQ(SUS)} *	I _C =0.03A, I _B =0	45 60 80			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =0.1mA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			10	μA
DC current gain	h _{FE(1)} *	V _{CE} =2V, I _C =150mA	40		250	
	h _{FE(2)} *	V _{CE} =2V, I _C =5mA	25			
	h _{FE(3)} *	V _{CE} =2V, I _C =500mA	25			
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =500mA, I _B =50mA			0.5	V
Base-emitter voltage	V _{BE} *	V _{CE} =2V, I _C =500mA			1	V

*Pulse test: pulse width ≤350μs, duty cycle≤ 2.0%.

CLASSIFICATION OF h_{FE(1)}

RANK	6	10	16
RANGE	40-100	63-160	100-250

Typical Characteristics



TO-18 PACKAGE OUTLINE

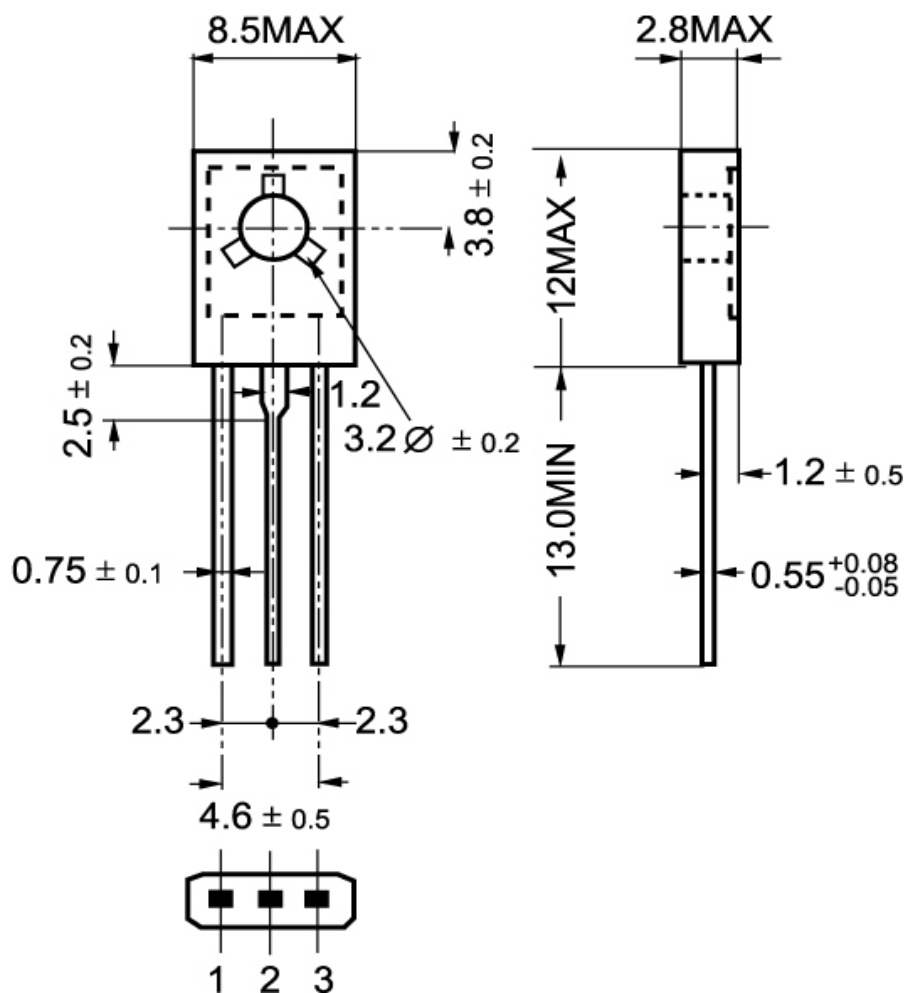


Fig.2 Outline dimensions