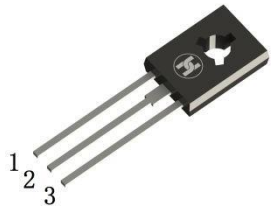
BIPOLAR TRANSISTOR (PNP)

FEATURES

- Complement to BD139
- High Current



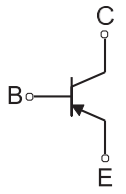
1. EMITTER 2.COLLECTOR 3.BASE

TO-126

MECHANICAL DATA

- Case: TO-126
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.5 grams (approximate)

Equivalent Circuit



MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	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
Collector Power Dissipation	P_C	1.25	W
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	100	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~+150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$*	-80			V	I_C=-100μA,I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	-80			V	I_C=-30mA,I_B=0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5			V	I_E=-100μA,I_C=0
Collector cut-off current	I_{CBO}			-0.1	μA	V_{CB}=-30V, I_E=0
Emitter cut-off current	I_{EBO}			-10	μA	V_{EB}=-5V, I_C=0
DC current gain	h_{FE}*	40		250		V_{CE}=-2V, I_C=-150mA
		25				V_{CE}=-2V, I_C=-5mA
		25				V_{CE}=-2V, I_C=-500mA
Collector-emitter saturation voltage	$V_{CE(sat)}$*			-0.5	V	I_C=-500mA, I_B=-50mA
Base-emitter voltage	V_{BE}*			-1	V	V_{CE}=-2V, I_C=-500mA

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

CLASSIFICATION OF h_{FE}

Rank	6	10	16
Range	40-100	63-160	100-250

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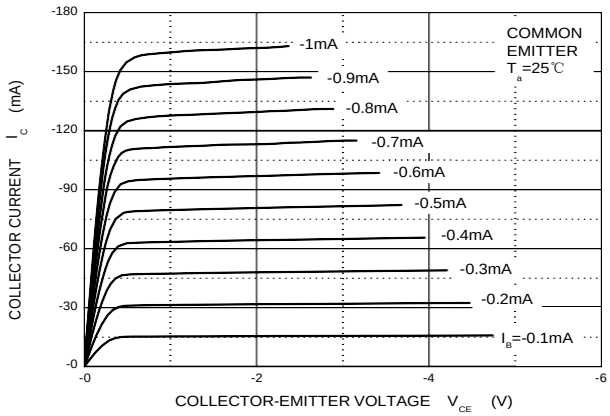
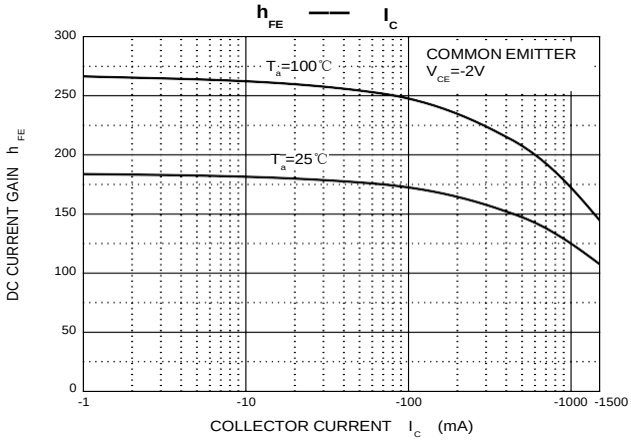
Typical Characteristics

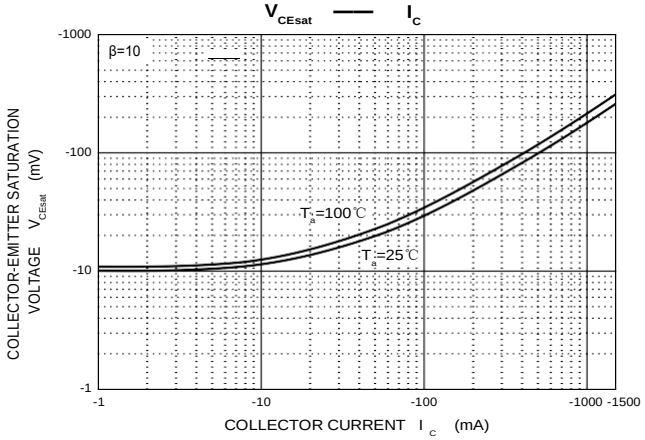
Static Characteristic



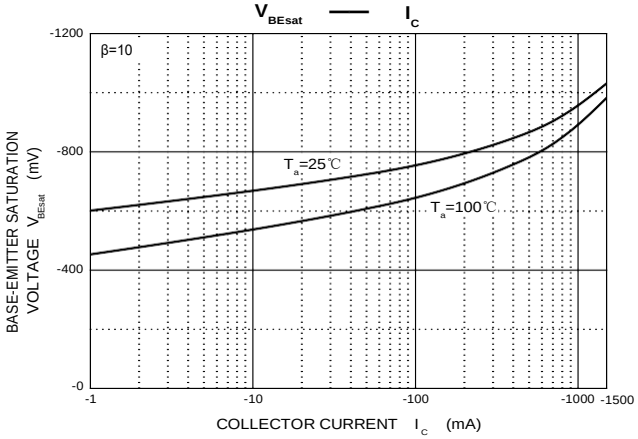
h FE —— I C



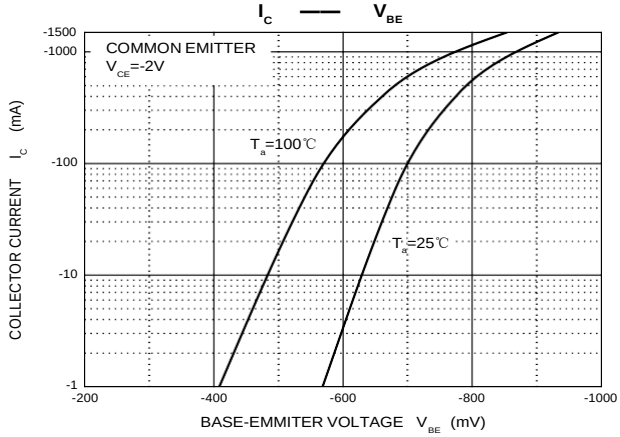
V CEsat —— I C



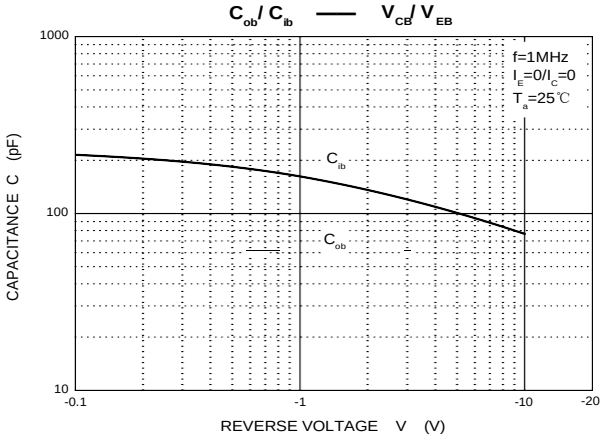
V BEsat —— I C



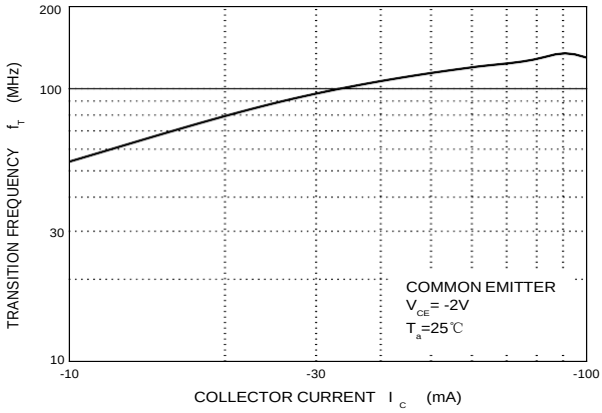
I C —— V BE



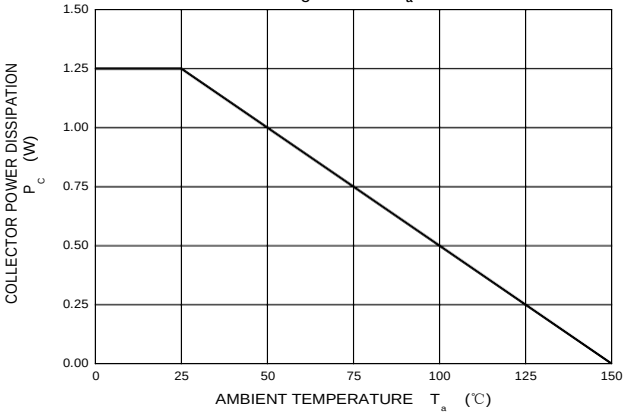
C ob / C ib —— V CB / V EB



f T —— I C

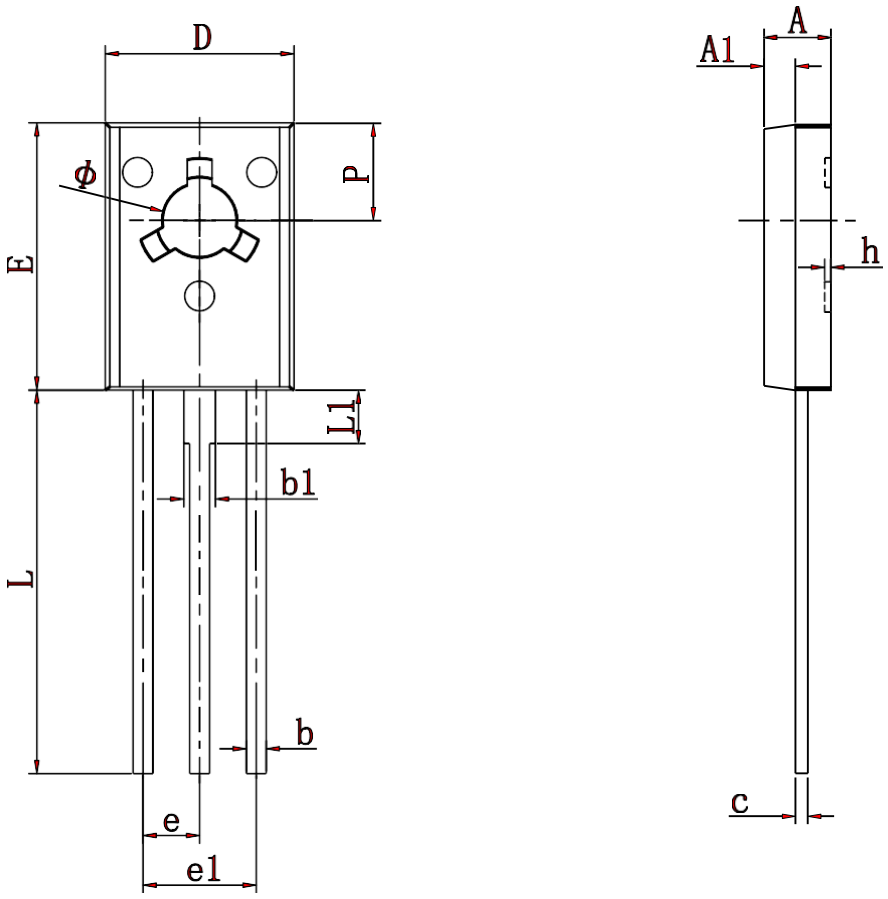


P C —— T a



BIPOLAR TRANSISTOR (PNP)

TO-126 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
Φ	3.000	3.200	0.118	0.126