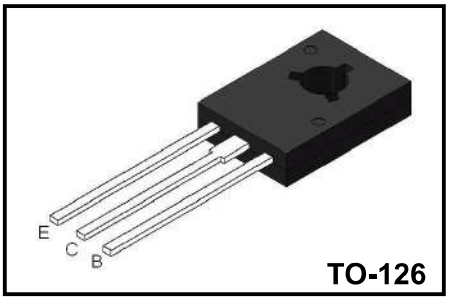
PNP Plastic-Encapsulate Transistors

Applications

- Audio power amplifier
- DC-DC convertor
- Voltage regulator

Features

- Low saturation voltage
- Complement to BD439



Absolute Maximum Rating (T_C=25℃ unless otherwise noted)

Parameter		Symbol	Value	Unit
Collector-Base Voltage		BV_{CBO}	-60	V
Collector-Emitter Voltage		BV_{CEO}	-60	V
Emitter-Base Voltage		BV_{EBO}	-5	V
Collector Current		I_C	-4	A
Power Dissipation	T_A=25℃	P_C	1	W
	T_C=25℃		25	
Junction Temperature		Tj	150	℃
Storage Temperature		Tstg	-55～150	℃

Electrical Characteristics (T_C=25℃ unless otherwise noted)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	I_C = -100μA，I_E = 0	-60			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = -1mA，I_B = 0	-60			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = -100μA，I_C = 0	-5			V
Collector cut-off current	I_{CEO}	V_{CB} = -60V，I_B = 0			-100	μA
Emitter cut-off current	I_{EBO}	V_{EB} =- 5V，I_C = 0			-100	μA
DC current gain*	$h_{FE}1$	V_{CE}=-5V，I_C= -10mA	20			
	$h_{FE}2$	V_{CE}=-1V，I_C= -0.5A	40			
	$h_{FE}3$	V_{CE}=-1V，I_C= -2A	25			
Collector-emitter saturation voltage*	$V_{CE(sat)}$	I_C = -2A，I_B = -0.2A		-0.3	-0.8	V
Base-emitter saturation voltage*	$V_{BE(on)}$	V_{CE}=-1V，I_C= -2A			-1.5	V
Transition frequency	f_T	V_{CE} = -1V，I_B = -0.25A	3			MHz
Output Capacitance	C_{ob}	V_{CB} = -10V,I_E = 0,f=1MHz		45		pF

* Pulse test: PW≤300μs, duty cycle≤2% Pulse

Typical Characteristics

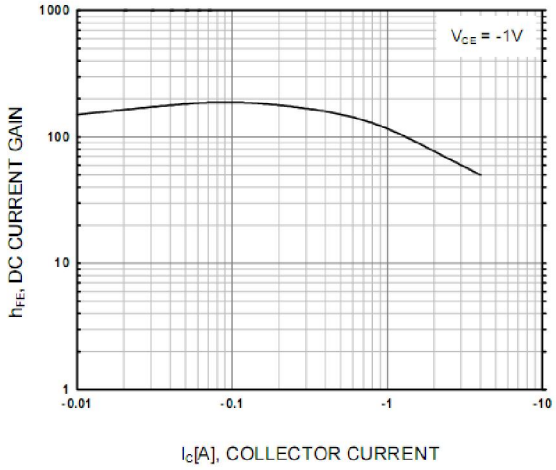


Figure 1. DC current Gain

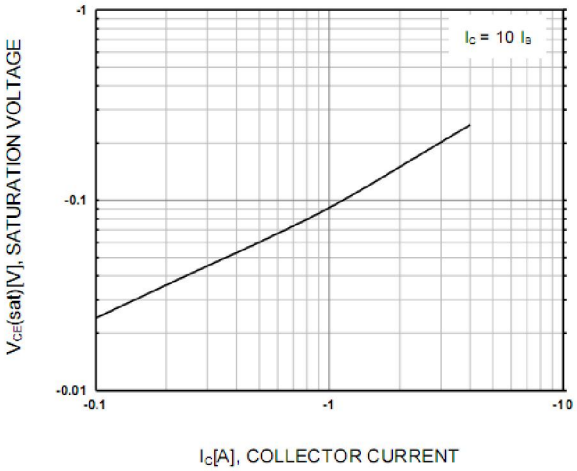


Figure 2. Collector-Emitter Saturation Voltage

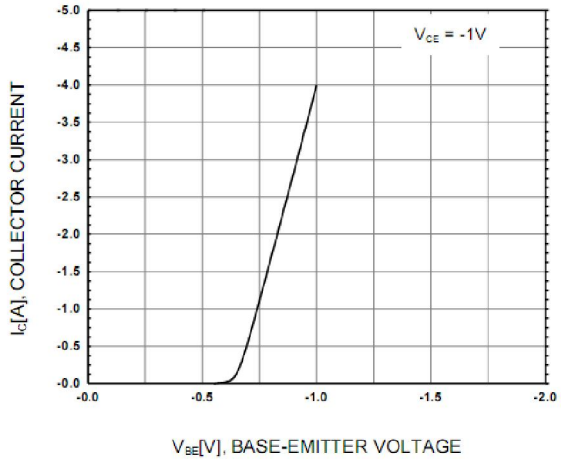


Figure 3. Base-Emitter On Voltage

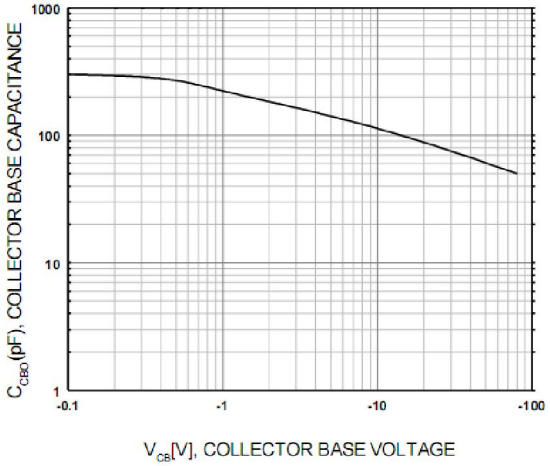


Figure 4. Collector-Base Capacitance

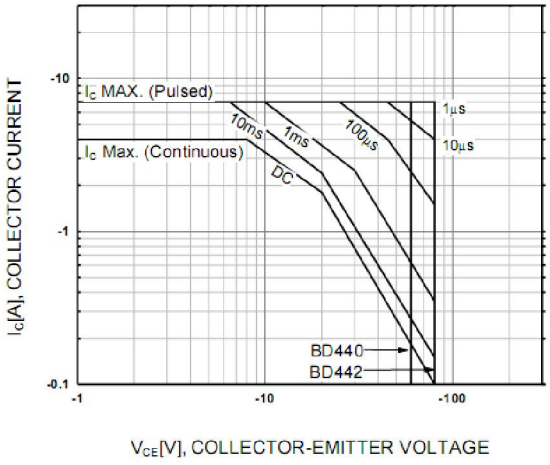


Figure 5. Safe Operating Area

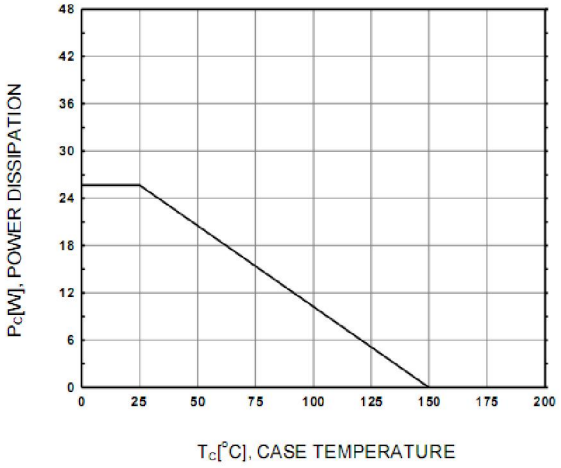


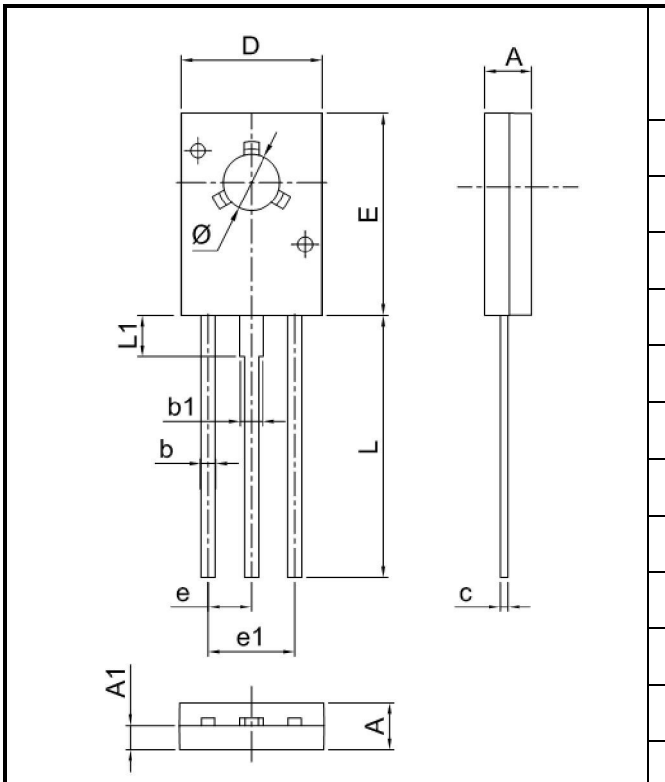
Figure 6. Power Derating

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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