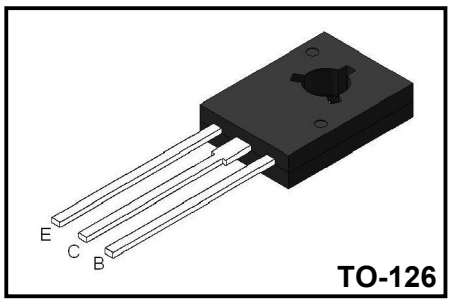
YFW 佑风微

BD441 TO-126

NPN Plastic-Encapsulate Transistors



Applications

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

Features

- High current output up to 4A
- Low saturation voltage
- Complement to BD441

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

Parameter		Symbol	Value	Unit
Collector-base voltage		BV_{CBO}	80	V
Collector-emitter voltage		BV_{CEO}	80	V
Emitter-base voltage		BV_{EBO}	5	V
Collector current (DC)		I_C	4	A
Collector current (Pluse)		I_{CP}	7	A
Base current		I_B	1	A
Power dissipation	T_A=25℃	P_C	1	W
	T_C=25℃		25	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	-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	80			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 1mA，I_B = 0	80			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 100μA，I_C = 0	5			V
Collector cut-off current	I_{CEO}	V_{CB} = 80V，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= 500mA	40			
	$h_{FE}3$	V_{CE}= 1V，I_C= 2A	15			
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 = 250mA	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

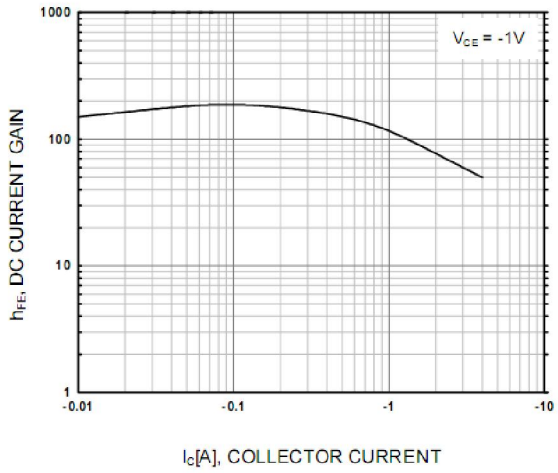


Figure 1. DC current Gain

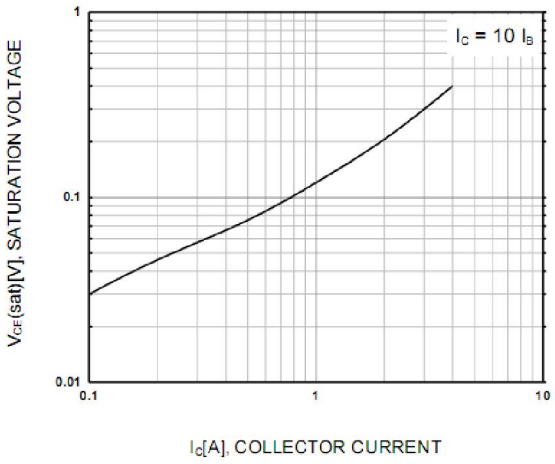


Figure 2. Collector-Emitter Saturation Voltage

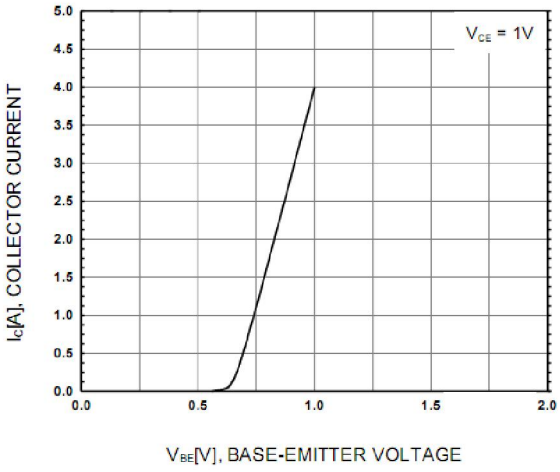


Figure 3. Base-Emitter On Voltage

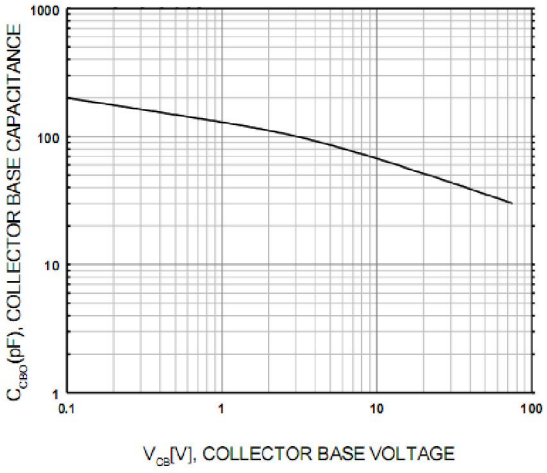


Figure 4. Collector-Base Capacitance

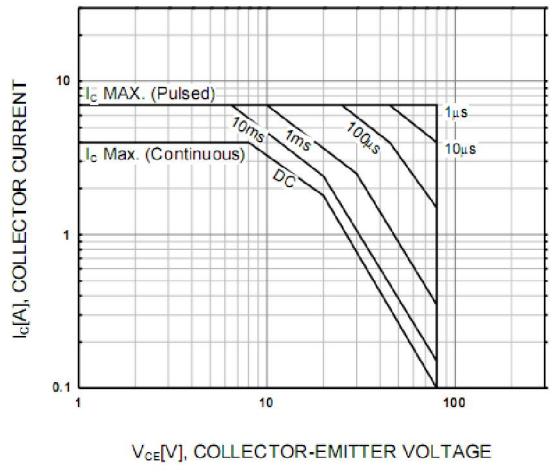


Figure 5. Safe Operating Area

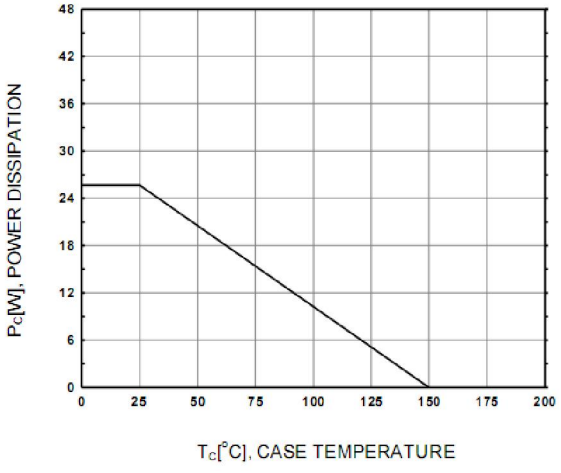
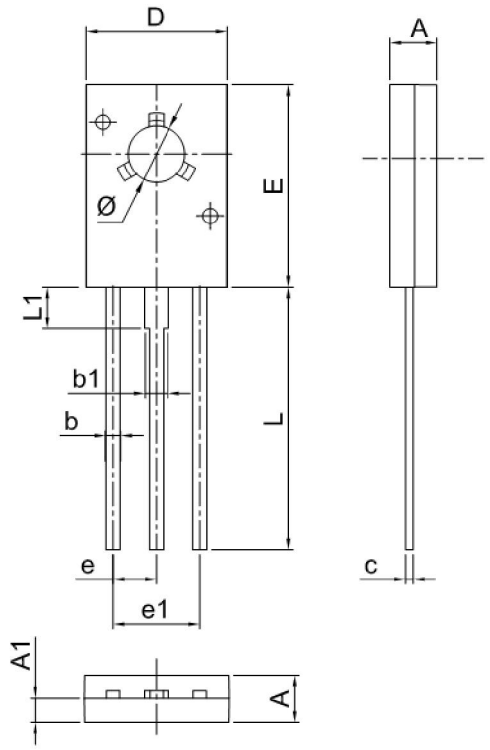


Figure 6. Power Derating

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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Package	Packing Method	Pack
TO-126	Bulk	500PCS/bag

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