

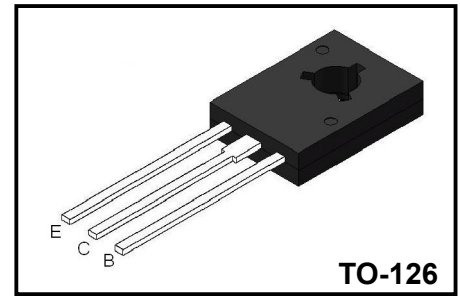
**NPN Plastic-Encapsulate Transistors**

**Applications**

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

**Features**

- High current output up to 3A
- Low saturation voltage
- Complement to 2SB772



**Absolute Maximum Rating (T<sub>c</sub>=25°C unless otherwise noted)**

Parameter		Symbol	Value	Unit
Collector-Base Voltage		BV <sub>CBO</sub>	40	V
Collector-Emitter Voltage		BV <sub>CEO</sub>	40	V
Emitter-Base Voltage		BV <sub>EBO</sub>	5	V
Collector Current		I <sub>C</sub>	3	A
Power Dissipation	T <sub>A</sub> =25°C	P <sub>C</sub>	1	W
	T <sub>C</sub> =25°C		10	
Junction Temperature		T <sub>J</sub>	150	°C
Storage Temperature		T <sub>stg</sub>	-55~150	°C

**Electrical Characteristics (T<sub>c</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV <sub>CBO</sub>	I <sub>C</sub> = 100μA, I <sub>E</sub> = 0	40			V
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>C</sub> = 1mA, I <sub>B</sub> = 0	40			V
Emitter-base breakdown voltage	BV <sub>EBO</sub>	I <sub>E</sub> = 100μA, I <sub>C</sub> = 0	5			V
Collector cut-off current	I <sub>CEO</sub>	V <sub>CB</sub> = 40V, I <sub>B</sub> = 0			1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0			1	μA
DC current gain*	h <sub>FE1</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> = 20mA	80			
	h <sub>FE2</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> = 1A	100		400	
Collector-emitter saturation voltage*	V <sub>CE(sat)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2A		0.25	0.5	V
Base-emitter saturation voltage*	V <sub>BE(sat)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2A		1.0	2.0	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 5V, I <sub>B</sub> = 0.1A	50			MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f=1MHz		45		pF

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

**h<sub>FE</sub> 2 Classification**

Classification	Q	P	E
Range	100-200	160-320	200-400

Typical Characteristics

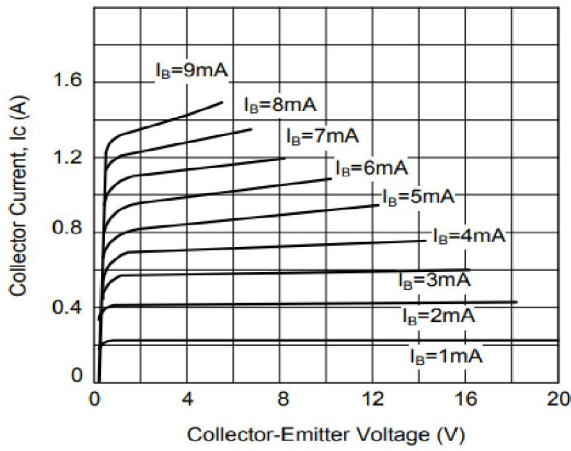


Figure 1. Static Characteristic

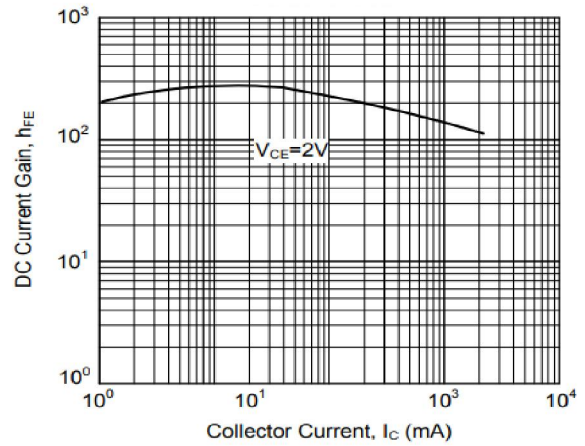


Figure 2. DC current Gain

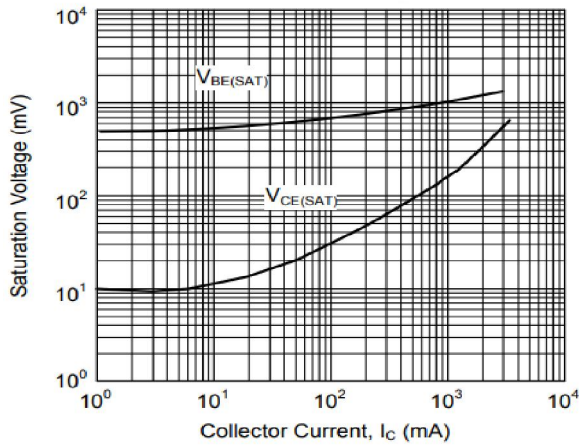


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

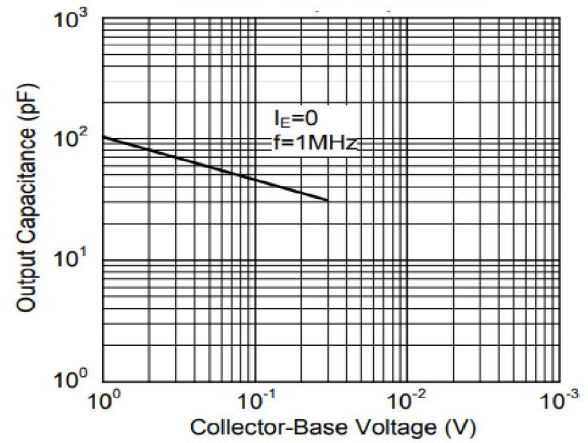


Figure 4. Collector Output Capacitance

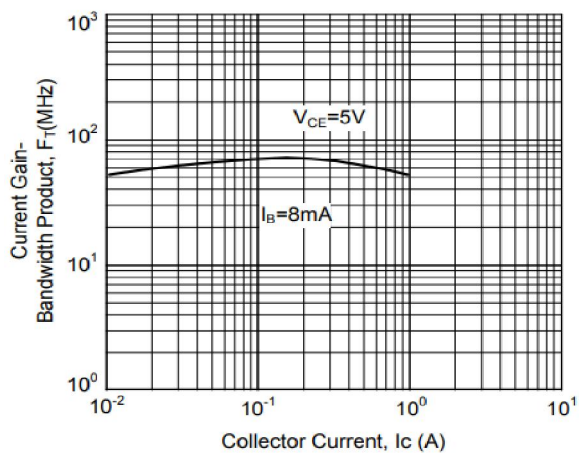


Figure 5. Current Gain-Bandwidth Product

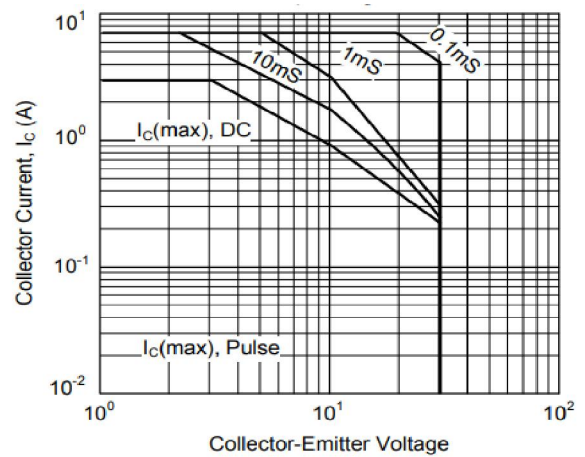


Figure 6. Safe Operating Area

**Package Dimensions**

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

**Product Specification Classification**

Part Number	Package	Marking	Pack
2SD882	TO-126	2SD882	500PCS/bag