

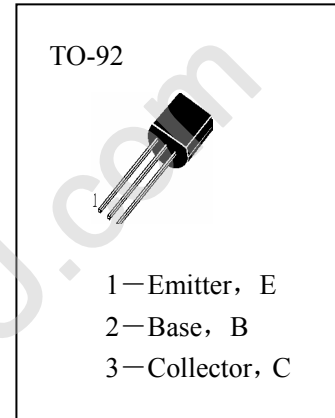


**■ NPN EPITAXIAL SILICON TRANSISTOR**

2W OUTPUT AMPLIFIER OF PORTABLE RADIOS IN CLASS  
B PUSH-PULL OPERATION.

**■ ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

T<sub>stg</sub>—Storage Temperature..... -55~150°C  
 T<sub>j</sub>—Junction Temperature.....150°C  
 P<sub>C</sub>—Collector Dissipation.....1W  
 V<sub>CBO</sub>—Collector-Base Voltage.....40V  
 V<sub>CEO</sub>—Collector-Emitter Voltage.....25V  
 V<sub>EBO</sub>—Emitter-Base Voltage.....6V  
 I<sub>C</sub>—Collector Current.....1.5A



**■ ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)**

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
ICBO	Collector Cut-off Current			0.1	μ A	V <sub>CB</sub> =35V, I <sub>E</sub> =0
IEBO	Emitter Cut-off Current			0.1	μ A	V <sub>EB</sub> =6V, I <sub>C</sub> =0
HFE	DC Current Gain	85		500		V <sub>CE</sub> =1V, I <sub>C</sub> =100mA
		40			V <sub>CE</sub> =1V, I <sub>C</sub> =800mA	
V <sub>BE</sub>	Base- Emitter Voltage			1	V	V <sub>CE</sub> =1V, I <sub>C</sub> =10mA
V <sub>CE(sat)</sub>	Collector- Emitter Saturation Voltage			0.5	V	I <sub>C</sub> =800mA, I <sub>B</sub> =80mA
V <sub>BE(sat)</sub>	Base- Emitter Saturation Voltage			1.2	V	I <sub>C</sub> =800mA, I <sub>B</sub> =80mA
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	40			V	I <sub>C</sub> =100 μ A, I <sub>E</sub> =0
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	25			V	I <sub>C</sub> =2mA, I <sub>B</sub> =0
BV <sub>EBO</sub>	Emitter- Base Breakdown Voltage	6			V	I <sub>E</sub> =100 μ A, I <sub>C</sub> =0
Cob	Output Capacitance		9.0		pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz
f <sub>T</sub>	Current Gain-Bandwidth Product	100			MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA

**■ h<sub>FE</sub> Classification**

B	C	D	E
85—160	120—200	160—300	270—500



### Typical Characteristics

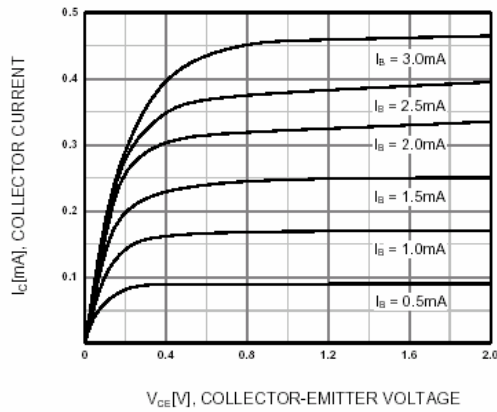


Figure 1. Static Characteristic

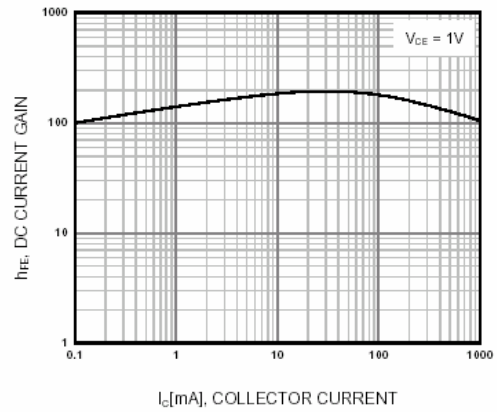


Figure 2. DC current Gain

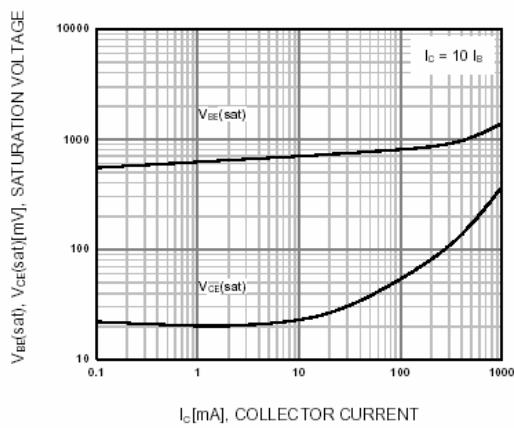


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

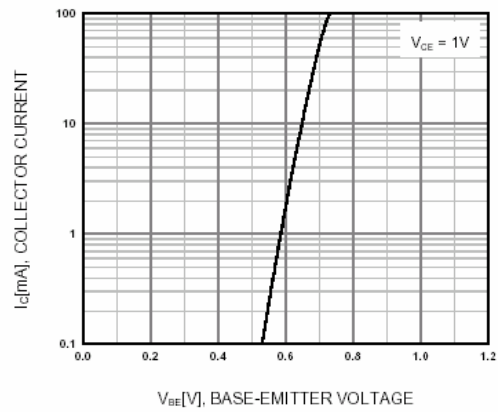


Figure 4. Base-Emitter On Voltage

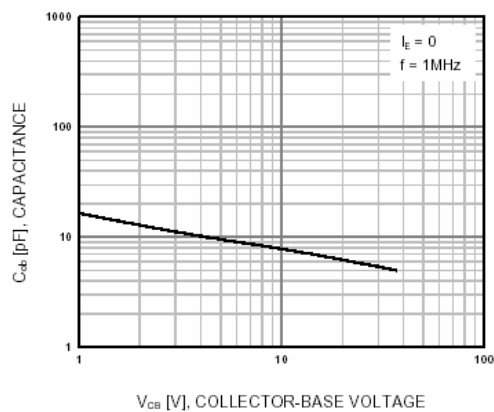


Figure 5. Collector Output Capacitance

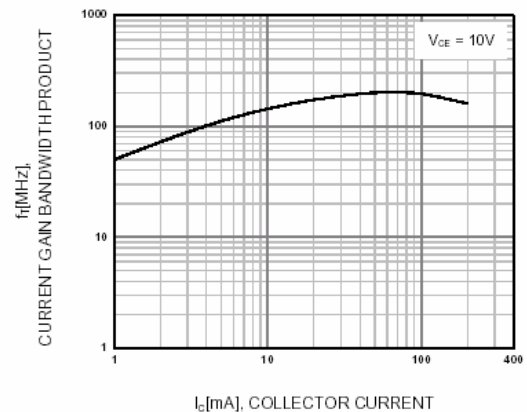


Figure 6. Current Gain Bandwidth Product