



Shantou Huashan Electronic Devices Co., Ltd.

PNP SILICON TRANSISTOR

**H9012**

■ **1W OUTPUT AMPLIFIER OF POTABLE 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..... 625mW

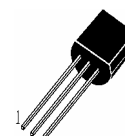
V<sub>CBO</sub>—Collector-Base Voltage..... -40V

V<sub>CEO</sub>—Collector-Emitter Voltage..... -20V

V<sub>EBO</sub>—Emitter-Base Voltage..... -5V

I<sub>C</sub>—Collector Current..... -500mA

TO-92



1—Emitter, E

2—Base, B

3—Collector, C

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

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
I <sub>CBO</sub>	Collector Cut-off Current			-100	nA	V <sub>CB</sub> =-25V, I <sub>E</sub> =0
I <sub>EBO</sub>	Emitter Cut-off Current			-100	nA	V <sub>EB</sub> =-3V, I <sub>C</sub> =0
H <sub>FE</sub> (1)	DC Current Gain	78		246		V <sub>CE</sub> =-1V, I <sub>C</sub> =-50mA
H <sub>FE</sub> (2)		40				V <sub>CE</sub> =-1V, I <sub>C</sub> =-500mA
V <sub>CE(sat)</sub>	Collector- Emitter Saturation Voltage			-600	mV	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage			-1.2	V	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA
V <sub>BE(ON)</sub>	Base-Emitter On Voltage	-600		-730	mV	V <sub>CE</sub> =-1V, I <sub>C</sub> =-10mA
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	-20			V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	-5			V	I <sub>E</sub> =-100 μ A, I <sub>C</sub> =0

■ **h<sub>FE</sub> Classification**

E	F	G	H	I
78—112	96—135	112—166	144—202	176—246



Typical Characteristics

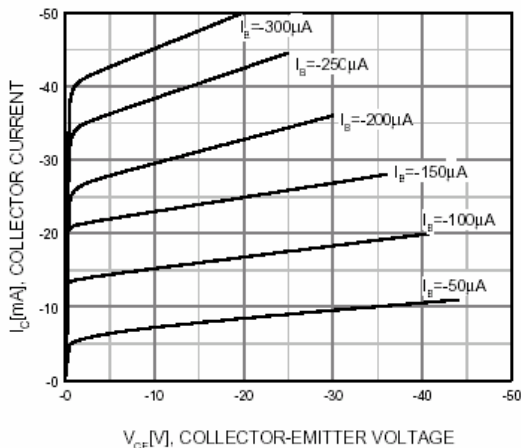


Figure 1. Static Characteristic

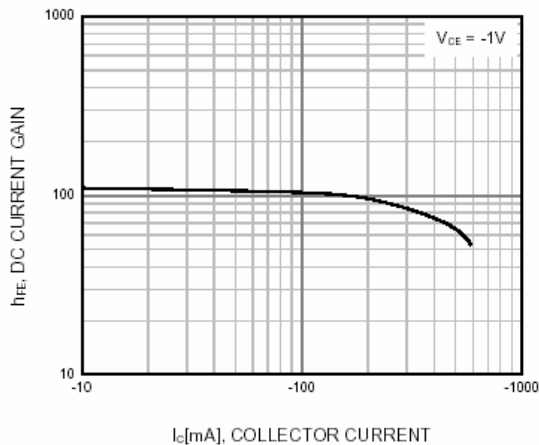


Figure 2. DC current Gain

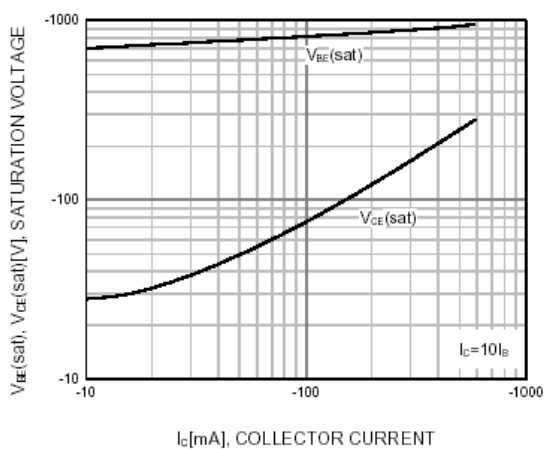


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

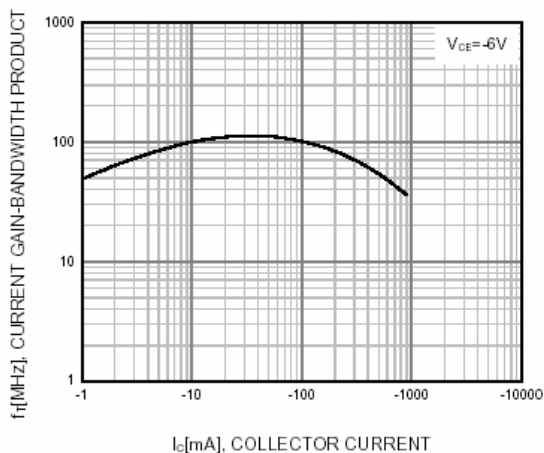


Figure 4. Current Gain Bandwidth Product