



Shantou Huashan Electronic Devices Co., Ltd.

NPN SILICON TRANSISTOR

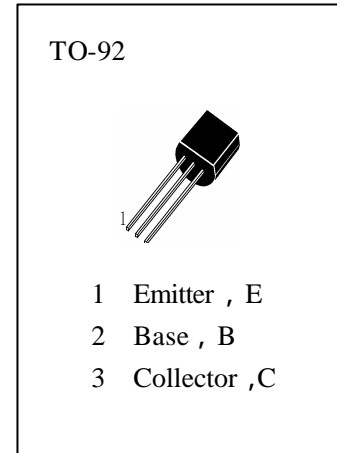
H9013

1W OUTPUT AMPLIFIER OF POTABLE RADIOS IN CLASS

B PUSH-PULL OPERATION.

ABSOLUTE MAXIMUM RATINGS ($T_a=25$)

- T_{stg} —Storage Temperature..... -55~150
- T_j —Junction Temperature.....150
- P_C —Collector Dissipation.....625mW
- V_{CBO} —Collector-Base Voltage.....40V
- V_{CEO} —Collector-Emitter Voltage.....30V
- V_{EBO} —Emitter-Base Voltage.....5V
- I_C —Collector Current.....500mA



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
ICBO	Collector Cut-off Current			100	nA	$V_{CB}=25V, I_E=0$
IEBO	Emitter Cut-off Current			100	nA	$V_{EB}=3V, I_C=0$
HFE(1)	DC Current Gain	78		246		$V_{CE}=1V, I_C=50mA$
HFE(2)		40				$V_{CE}=1V, I_C=500mA$
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage			600	mV	$I_C=500mA, I_B=50mA$
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			1.2	V	$I_C=500mA, I_B=50mA$
$V_{BE(ON)}$	Base-Emitter On Voltage	600		730	mV	$V_{CE}=1V, I_C=10mA$
BVCBO	Collector-Base Breakdown Voltage	40			V	$I_C=100 \mu A, I_E=0$
BVCEO	Collector-Emitter Breakdown Voltage	30			V	$I_C=1mA, I_B=0$
BVEBO	Emitter-Base Breakdown Voltage	5			V	$I_E=100 \mu A, I_C=0$

hFE Classification

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



Typical Characteristics

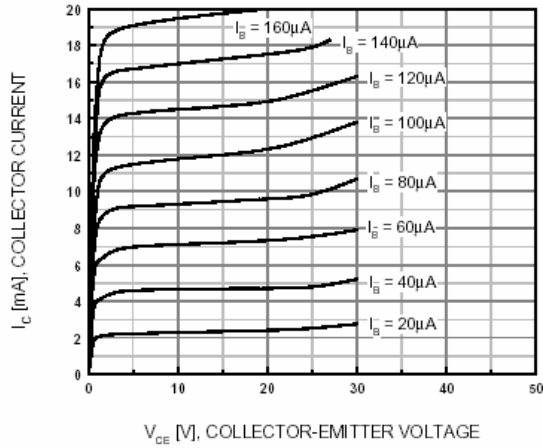


Figure 1. Static Characteristic

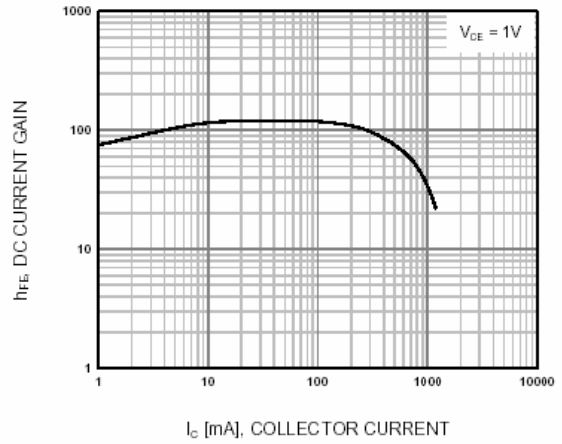


Figure 2. DC current Gain

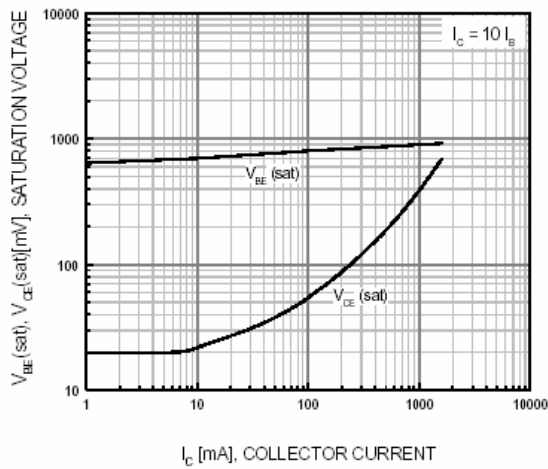


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

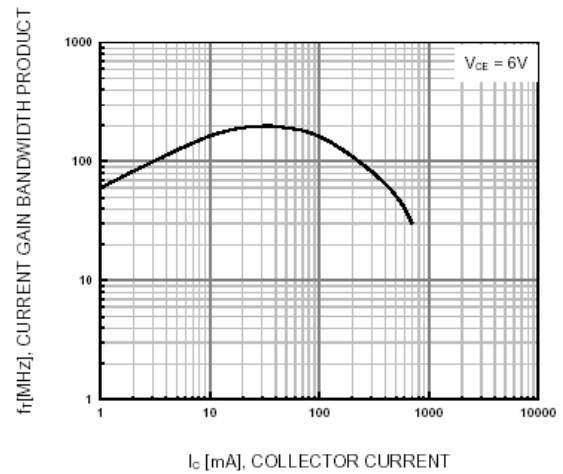


Figure 4. Current Gain Bandwidth Product