

Transistors

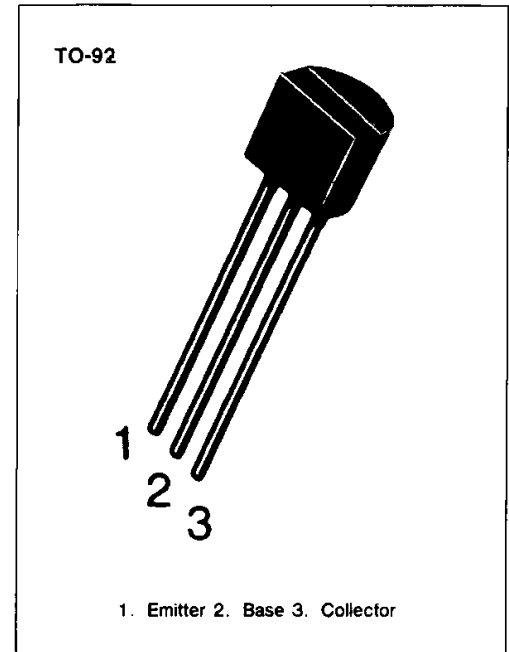
2SC9013

1W OUTPUT AMPLIFIER OF POTABLE RADIOS IN CLASS B PUSH-PULL OPERATION.

- High total power dissipation. ($P_T = 625\text{mW}$)
- High Collector Current. ($I_C = 500\text{mA}$)
- Complementary to SS9012
- Excellent h_{FE} linearity

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

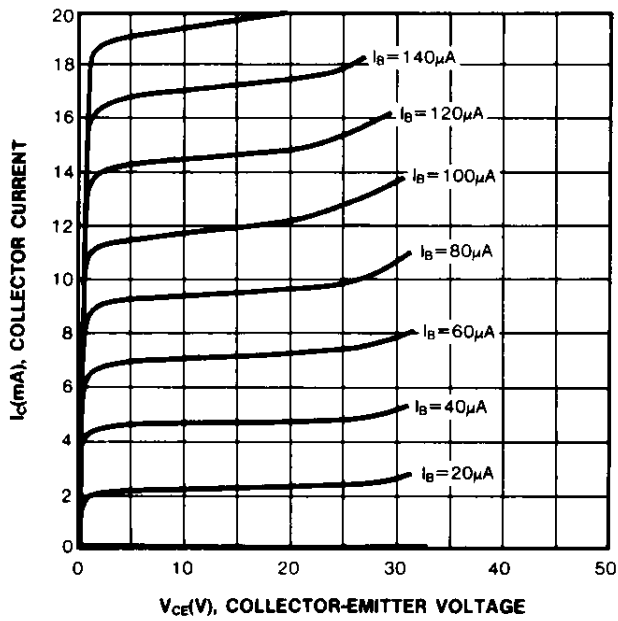
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 1\text{mA}$, $I_B = 0$	20			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 100\mu\text{A}$, $I_C = 0$	5			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 25\text{V}$, $I_E = 0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 3\text{V}$, $I_C = 0$			100	nA
DC Current Gain	h_{FE1}	$V_{CE} = 1\text{V}$, $I_C = 50\text{mA}$	64	120	202	
	h_{FE2}	$V_{CE} = 1\text{V}$, $I_C = 500\text{mA}$	40	120		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$		0.16	0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$		0.91	1.2	V
Base-Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = 1\text{V}$, $I_C = 10\text{mA}$	0.6	0.67	0.7	V

h_{FE} (1) CLASSIFICATION

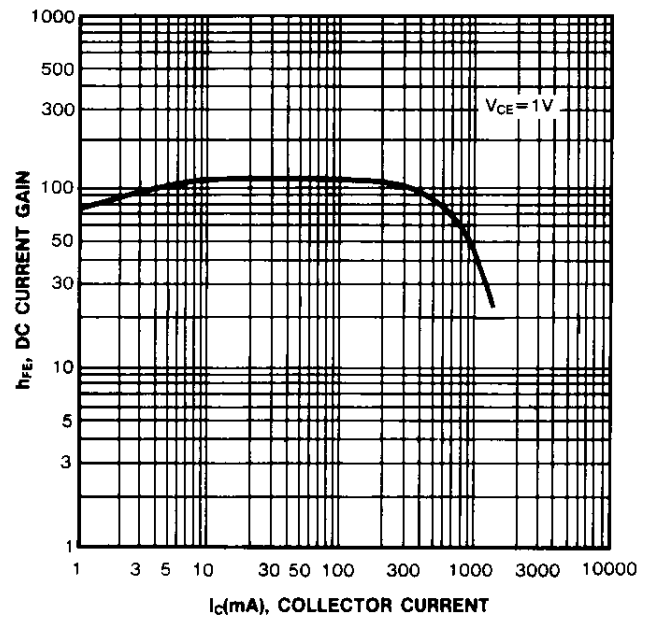
Classification	D	E	F	G	H
$h_{FE} (1)$	64-91	78-112	96-135	112-166	144-202



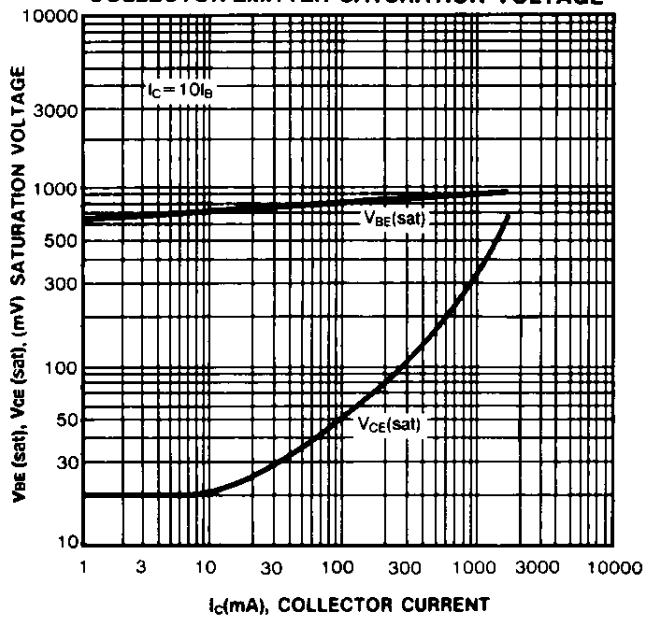
STATIC CHARACTERISTIC



DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT

