

Transistors

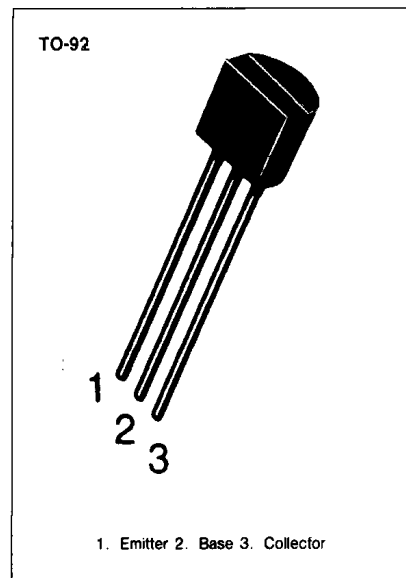
2SA9012

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

- High total power dissipation. (PT=625mW)
- High Collector Current. ($I_c = -500mA$)
- Excellent h_{FE} linearity

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

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	$^\circ C$
Storage Temperature	T_{stg}	-55~150	$^\circ C$



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

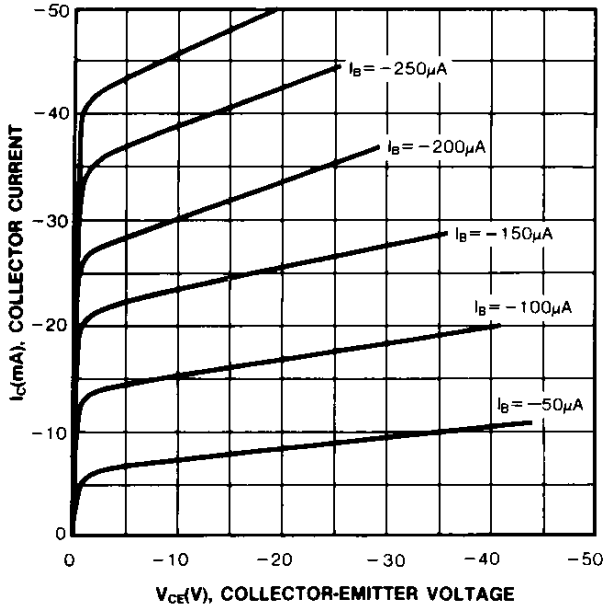
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_c = -100\mu A, I_E = 0$	-40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_c = -1mA, I_B = 0$	-20			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -100\mu A, I_C = 0$	-5			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = -25V, I_E = 0$			-100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -3V, I_C = 0$			-100	nA
DC Current Gain	h_{FE1}	$V_{CE} = -1V, I_c = -50mA$	64	120	202	
	h_{FE2}	$V_{CE} = -1V, I_c = -500mA$	40	90		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c = -500mA, I_B = -50mA$		-0.18	-0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_c = -500mA, I_B = -50mA$		-0.95	-1.2	V
Base-Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = -1V, I_c = -10mA$	-0.6	-0.67	-0.7	V

h_{FE} (1) CLASSIFICATION

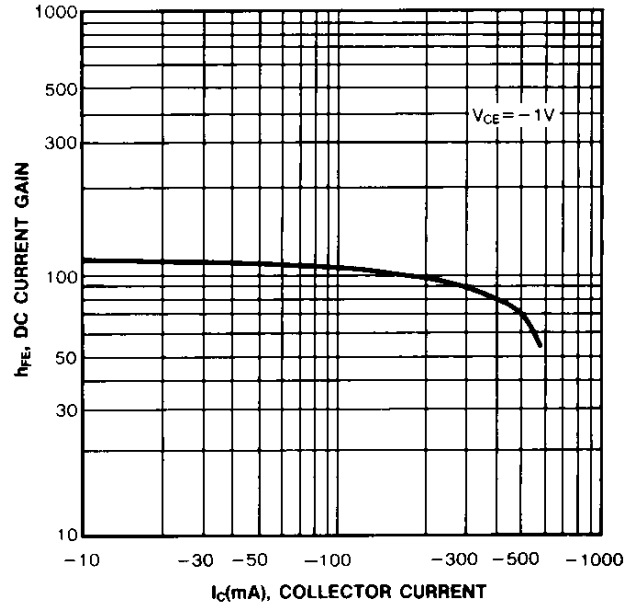
Classification	D	E	F	G	H
h_{FE} (1)	64-91	78-112	96-135	112-166	144-202



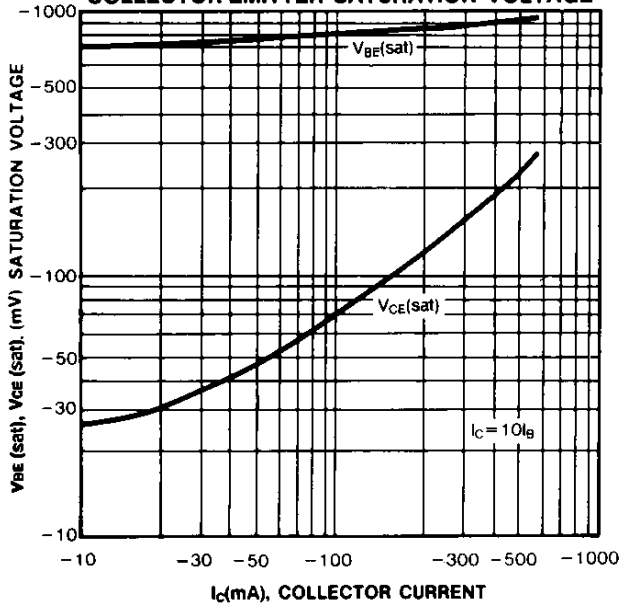
STATIC CHARACTERISTIC



DC CURRENT GAIN



**BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE**



CURRENT GAIN-BANDWIDTH PRODUCT

