

PNP SILICON TRANSISTOR JE9112

DESCRIPTION The JE9112 is designed for use in output amplifier of portable radios in class B push-pull operation.

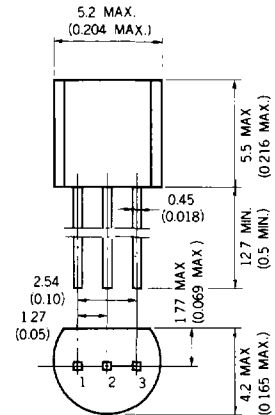
- FEATURES**
- High total power dissipation. ($P_T : 2.0 \text{ W}$, $T_C = 25 \text{ }^\circ\text{C}$)
 - High collector current. ($I_C : -1.5 \text{ A}$)
 - Complementary to JE9113.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures
 Storage Temperature -65 to $+150 \text{ }^\circ\text{C}$
 Junction Temperature $+150 \text{ }^\circ\text{C}$ Maximum
 Maximum Power Dissipations
 Total Power Dissipation ($T_a = 25 \text{ }^\circ\text{C}$) 1.0 W
 Transistor mounted on printed circuit board,
 max. lead length 4 mm , mounting pad for collector lead min.
 $10 \text{ mm} \times 10 \text{ mm}$.
 Total Power Dissipation ($T_C = 25 \text{ }^\circ\text{C}$) 2.0 W
 Thermal Resistance ($T_a = 25 \text{ }^\circ\text{C}$)
 (Junction to Ambient) . . . $156.25 \text{ }^\circ\text{C/W}$
 Maximum Voltages and Currents ($T_a = 25 \text{ }^\circ\text{C}$)
 V_{CBO} Collector to Base Voltage -35 V
 V_{CEO} Collector to Emitter Voltage -25 V
 V_{EBO} Emitter to Base Voltage -6.0 V
 I_C Collector Current -1.5 A
 I_B Base Current -0.5 A

PACKAGE DIMENSIONS

in millimeters (inches)



1. EMITTER EIAJ : SC-43
 2. BASE JEDEC : TO-92
 3. COLLECTOR IEC : PA33

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

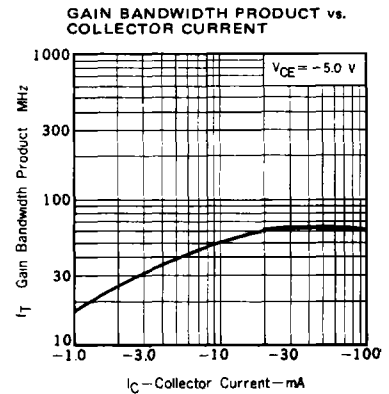
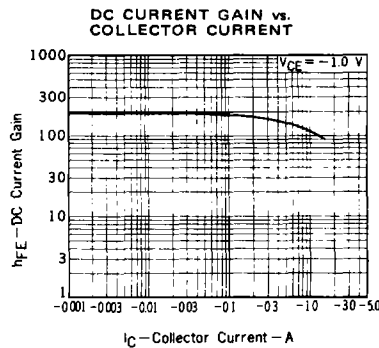
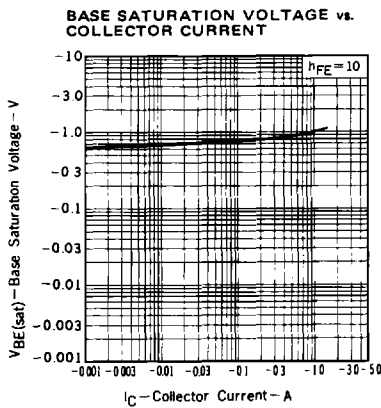
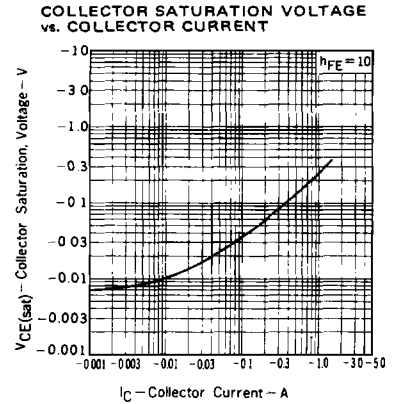
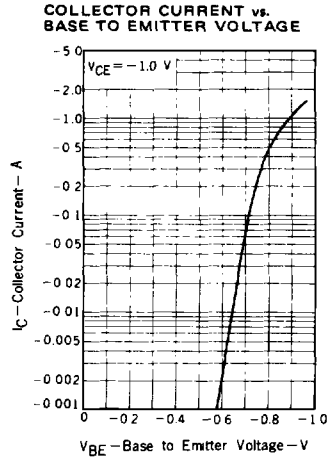
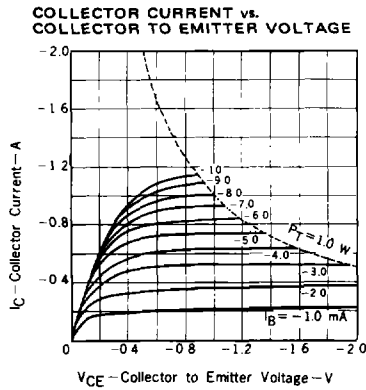
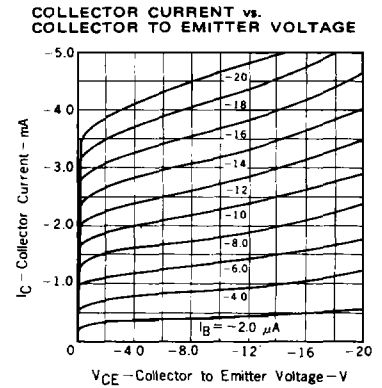
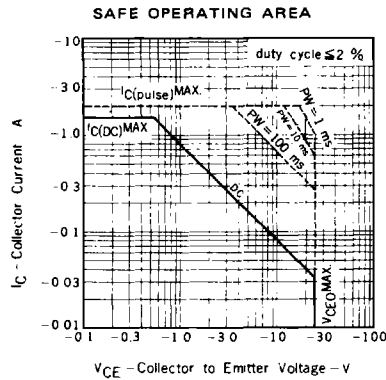
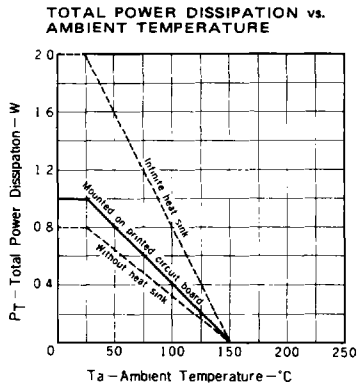
SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE1}	DC Current Gain	40	180		—	$V_{CE} = -1.0 \text{ V}$, $I_C = -5.0 \text{ mA}$
h_{FE2}	DC Current Gain	60	180	300	—	$V_{CE} = -1.0 \text{ V}$, $I_C = -100 \text{ mA}$
h_{FE3}	DC Current Gain	30	110		—	$V_{CE} = -1.0 \text{ V}$, $I_C = -1000 \text{ mA}$
f_T	Gain Bandwidth Product	10	50		MHz	$V_{CE} = -5.0 \text{ V}$, $I_C = -10 \text{ mA}$
C_{ob}	Output Capacitance		26		pF	$V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1.0 \text{ MHz}$
I_{CBO}	Collector Cutoff Current			-100	nA	$V_{CB} = -35 \text{ V}$, $I_E = 0$
I_{CEO}	Collector Cutoff Current			-1.0	μA	$V_{CE} = -25 \text{ V}$, $I_B = 0$
I_{EBO}	Emitter Cutoff Current			-100	nA	$V_{EB} = -6.0 \text{ V}$, $I_C = 0$
V_{BE}	Base to Emitter Voltage		-0.96	-1.0	V	$V_{CE} = -1.0 \text{ V}$, $I_C = -800 \text{ mA}$
$V_{CE(sat)}$	Collector Saturation Voltage		-0.2	-0.5	V	$I_C = -800 \text{ mA}$, $I_B = -80 \text{ mA}$
$V_{BE(sat)}$	Base Saturation Voltage		-0.95	-1.2	V	$I_C = -800 \text{ mA}$, $I_B = -80 \text{ mA}$
BV_{CBO}	Collector to Base Breakdown Voltage	-35			V	$I_C = -0.1 \text{ mA}$, $I_E = 0$
BV_{CEO}	Collector to Emitter Breakdown Voltage	-25			V	$I_C = -2.0 \text{ mA}$, $I_B = 0$
BV_{EBO}	Emitter to Base Breakdown Voltage	-6.0			V	$I_E = -0.1 \text{ mA}$, $I_C = 0$

Classification of h_{FE2}

Rank	A	B	C	D
Range	60 - 120	85 - 160	120 - 200	160 - 300

h_{FE} Test Conditions : $V_{CE} = -1.0 \text{ V}$, $I_C = -100 \text{ mA}$

TYPICAL CHARACTERISTICS (Ta = 25 °C unless otherwise noted)



OUTPUT CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE

