

## SS9012

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### 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 SS9013
- Excellent  $h_{FE}$  linearity.



### PNP Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	-40	V
$V_{CEO}$	Collector-Emitter Voltage	-20	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-500	mA
$P_C$	Collector Power Dissipation	625	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

#### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

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

#### $h_{FE}$ Classification

Classification	D	E	F	G	H
$h_{FE1}$	64 ~ 91	78 ~ 112	96 ~ 135	112 ~ 166	144 ~ 202

# Typical Characteristics

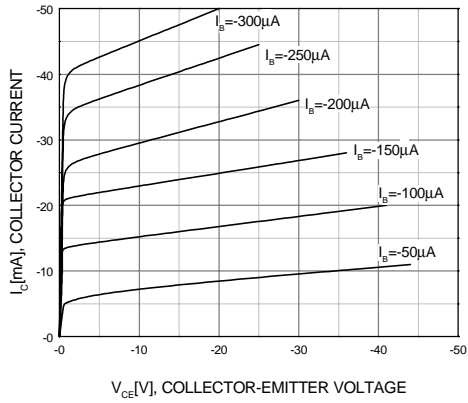


Figure 1. Static Characteristic

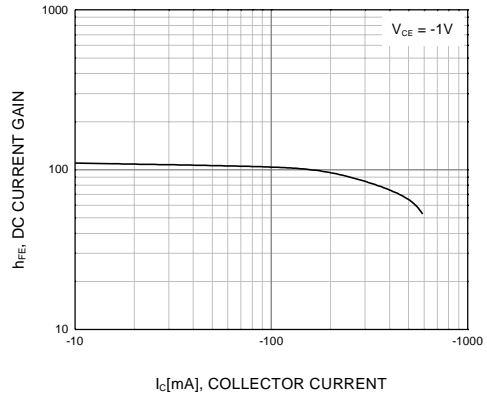


Figure 2. DC current Gain

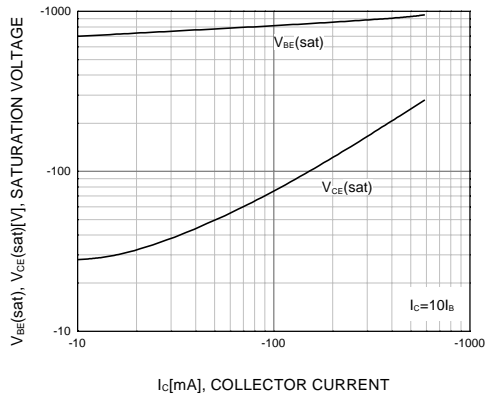


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

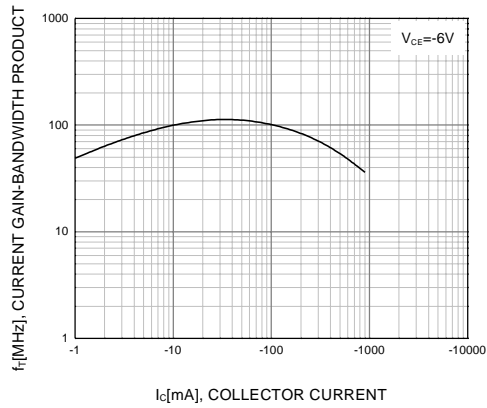


Figure 4. Current Gain Bandwidth Product

# Package Dimensions

## TO-92



Dimensions in Millimeters

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