



S9012

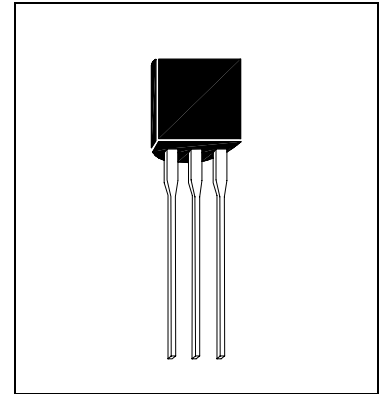
PNP EPITAXIAL PLANAR TRANSISTOR

Description

The S9012 is designed for use in 1W output amplifier of portable radios in class B push-pull operation.

Features

- High total power dissipation. (PT:625mW)
- High collector current. (IC:500mA)
- Complementary to S9013
- Excellent linearity.



Absolute Maximum Ratings

- Maximum Temperatures
Storage Temperature -55~+150°C
Junction Temperature +150°C Maximum
- Maximum Power Dissipation
Total Power Dissipation (Ta=25°C)..... 625mW
- Maximum Voltages and Currents (Ta=25°C)
VCBO Collector to Base Voltage..... 40 V
VCEO Collector to Emitter Voltage..... 20 V
VEBO Emitter to Base Voltage..... 5 V
IC Collector Current 500 mA
Icp Base Current..... 100 mA

Characteristics (Ta=25°C)

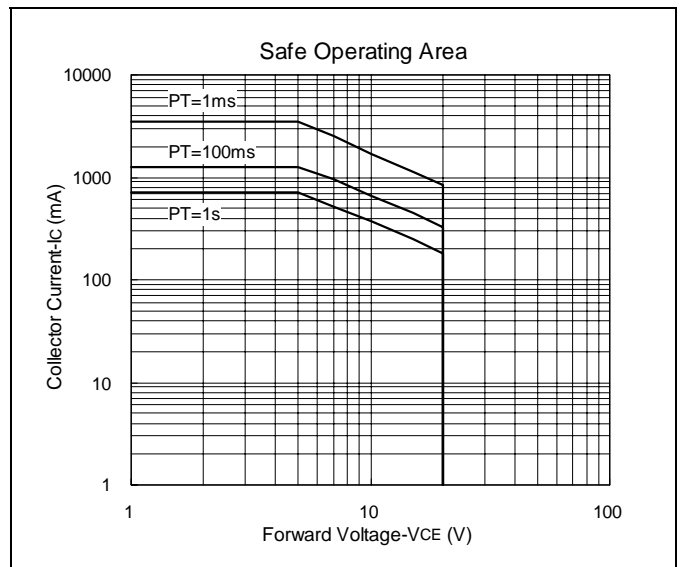
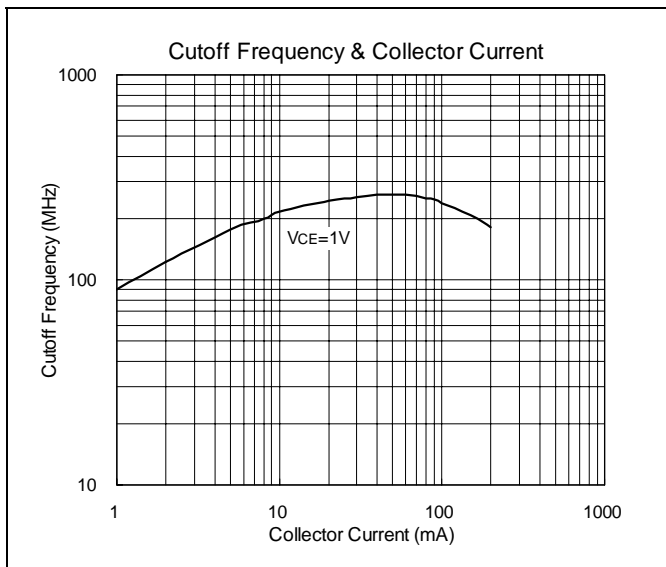
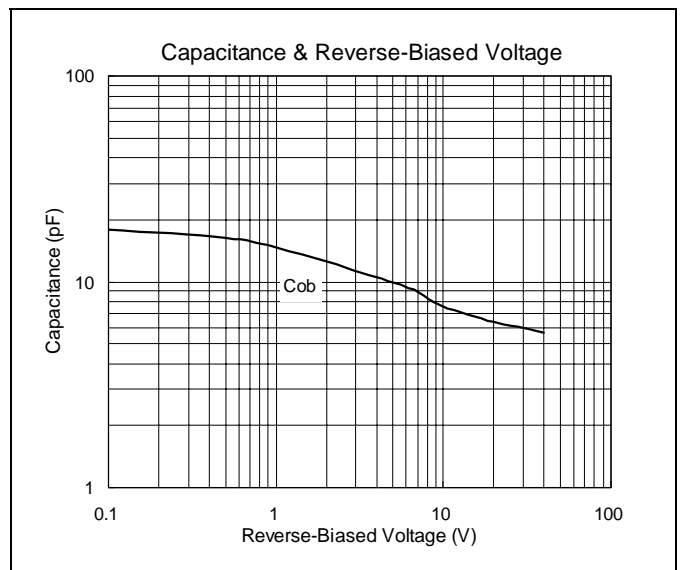
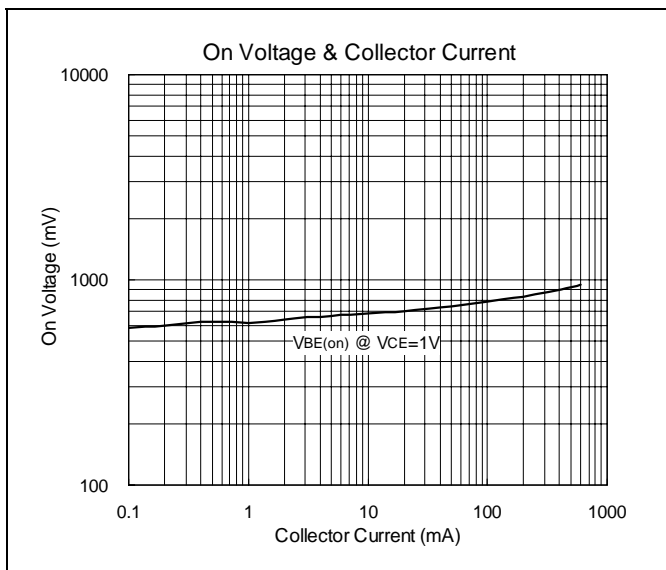
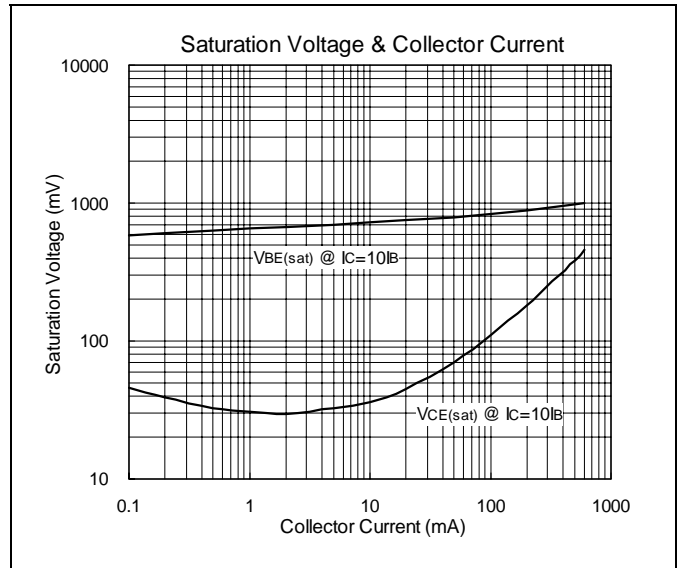
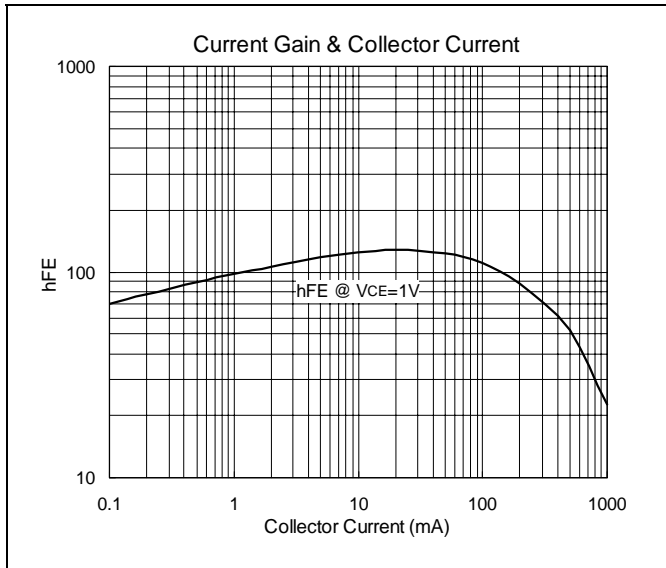
| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|----------|------|------|------|------|---------------------------|
| BVCBO | 40 | - | - | V | IC=100uA, IE=0 |
| BVCEO | 20 | - | - | V | IC=1mA, IB=0 |
| BVEBO | 5.0 | - | - | V | IE=100uA, IC=0 |
| ICBO | - | - | 100 | nA | VCE=25V, IE=0 |
| IEBO | - | - | 100 | nA | VEB=3V, IC=0 |
| VCE(sat) | - | - | 0.6 | V | IC=500mA, IB=50mA |
| VBE(sat) | - | - | 1.2 | V | IC=500mA, IB=50mA |
| VBE(on) | - | - | 0.9 | V | VCE=1V, IC=10mA |
| hFE1 | 112 | 180 | 300 | | VCE=1V, IC=50mA |
| hFE2 | 40 | - | - | | VCE=1V, IC=500mA |
| Cob | - | - | 8 | pF | VCB=10V, f=1MHz |
| fT | 100 | - | - | MHz | VCE=1V, IC=10mA, f=100MHz |

Classification on hFE1

| Rank | G | H | I1 | I2 |
|-------|---------|---------|---------|---------|
| Range | 112-166 | 144-202 | 176-246 | 214-300 |

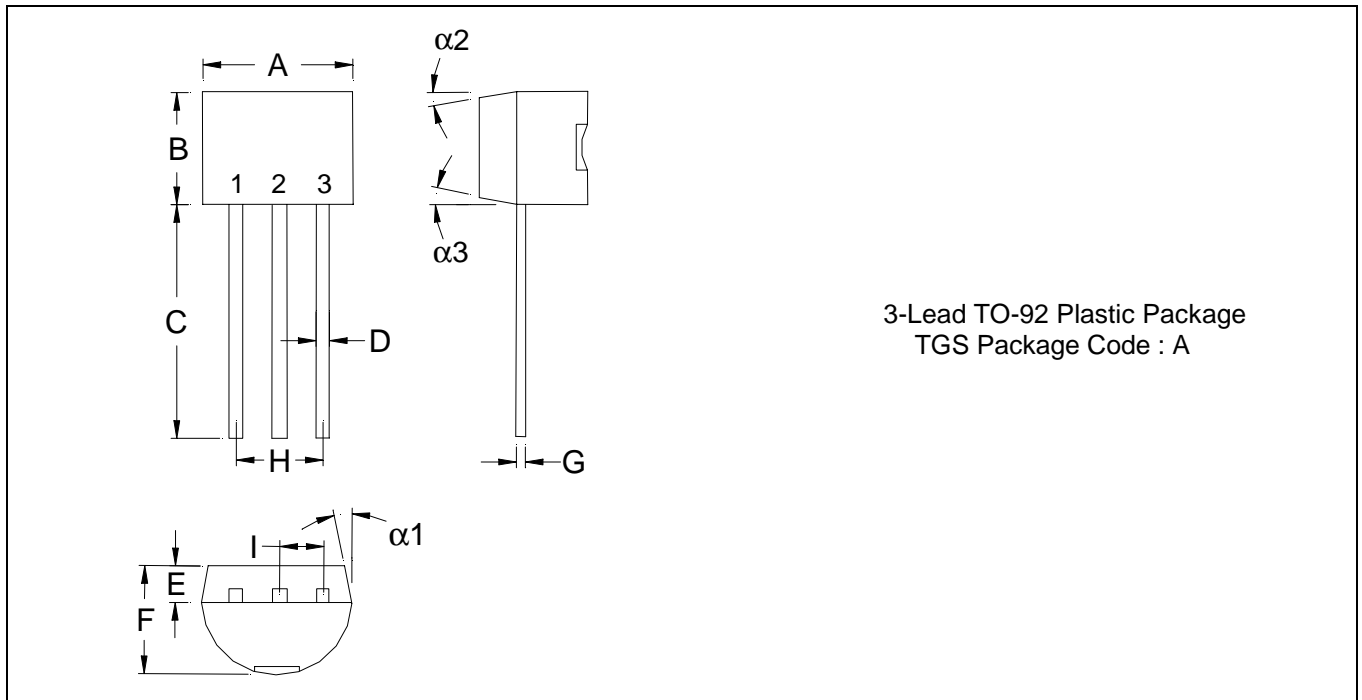


Characteristics Curve





TO-92 Dimension



*:Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|--------|---------|-------------|-------|------------|--------|---------|-------------|-------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.1704 | 0.1902 | 4.33 | 4.83 | G | 0.0142 | 0.0220 | 0.36 | 0.56 |
| B | 0.1704 | 0.1902 | 4.33 | 4.83 | H | - | *0.1000 | - | *2.54 |
| C | 0.5000 | - | 12.70 | - | I | - | *0.0500 | - | *1.27 |
| D | 0.0142 | 0.0220 | 0.36 | 0.56 | $\alpha 1$ | - | *5° | - | *5° |
| E | - | *0.0500 | - | *1.27 | $\alpha 2$ | - | *2° | - | *2° |
| F | 0.1323 | 0.1480 | 3.36 | 3.76 | $\alpha 3$ | - | *2° | - | *2° |