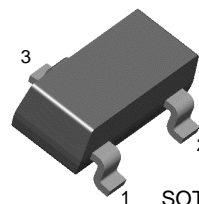


KSC2859

KSC2859

Low Frequency Power Amplifier

- Complement to KSA1182



1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

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

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|-----------|------------------|
| V_{CBO} | Collector-Base Voltage | 35 | V |
| V_{CEO} | Collector-Emitter Voltage | 30 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current | 500 | mA |
| P_C | Collector Power Dissipation | 150 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

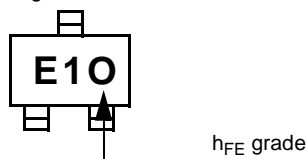
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|------------------------|--------------------------------------|--|----------|------|------|---------------|
| I_{CEO} | Collector Cut-off Current | $V_{CB}=35\text{V}, I_E=0$ | | | 0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB}=5\text{V}, I_C=0$ | | | 0.1 | μA |
| h_{FE1} h_{FE2} | DC Current Gain | $V_{CE}=1\text{V}, I_C=100\text{mA}$ $V_{CE}=6\text{V}, I_C=400\text{mA}$ | 70 25 | | 240 | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 0.1 | 0.25 | V |
| $V_{BE}(\text{on})$ | Base-Emitter On Voltage | $V_{CE}=1\text{V}, I_C=100\text{mA}$ | | 0.8 | 1.0 | V |
| f_T | Current Gain-Bandwidth Product | $V_{CE}=6\text{V}, I_C=20\text{mA}$ | | 300 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$ | | 7 | | pF |

h_{FE1} Classification

| Classification | O | Y |
|----------------|----------|-----------|
| h_{FE1} | 70 ~ 140 | 120 ~ 240 |

Marking



Typical Characteristics

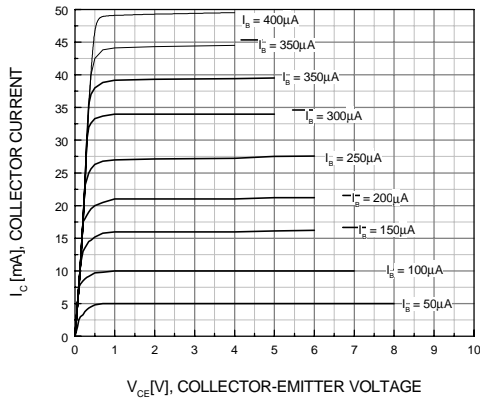


Figure 1. Static Characteristics

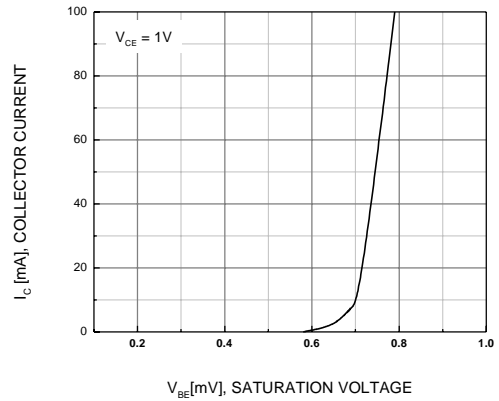


Figure 2. Base-Emitter On Voltage

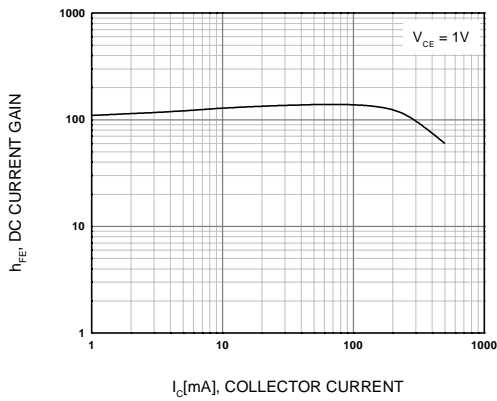


Figure 3. DC Current Gain

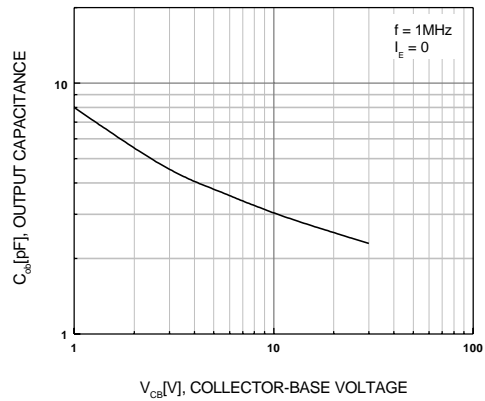


Figure 4. Output Capacitance

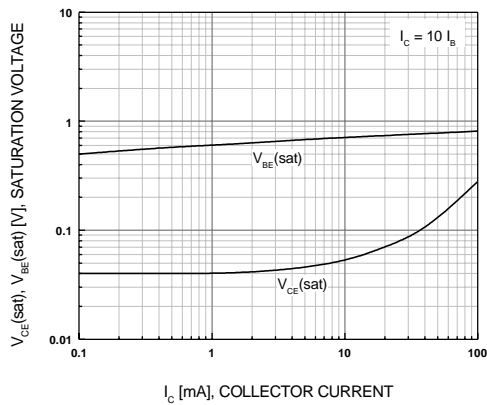


Figure 5. Saturation Voltage

Package Dimensions

SOT-23



Dimensions in Millimeters

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