

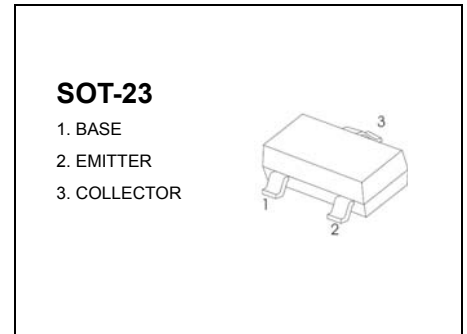
SOT-23 Plastic-Encapsulate Transistors

S9018 TRANSISTOR (NPN)

FEATURES

- AM/FM Amplifier, Local Oscillator of FM/VHF Tuner
- High Current Gain Bandwidth Product

MARKING: J8



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|---------------------|---|---------|------|
| V _{CB0} | Collector-Base Voltage | 30 | V |
| V _{CE0} | Collector-Emitter Voltage | 15 | V |
| V _{EBO} | Emitter-Base Voltage | 5 | V |
| I _c | Collector Current -Continuous | 50 | mA |
| P _c | Collector Power Dissipation | 200 | mW |
| F _{>5'} | Thermal Resistance from Junction to Ambient | 625 | °C/W |
| T _j | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55-150 | °C |

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|---|-----|-----|------|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C = 100µA, I _E =0 | 30 | | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = 1mA, I _B =0 | 15 | | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E =100µA, I _C =0 | 5 | | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =12V, I _E =0 | | | 0.05 | µA |
| Collector cut-off current | I _{CEO} | V _{CE} =12V, I _B =0 | | | 0.1 | µA |
| Emitter cut-off current | I _{EBO} | V _{EB} = 3V, I _C =0 | | | 0.1 | µA |
| DC current gain | h _{FE(1)} | V _{CE} =5V, I _C = 1mA | 70 | | 190 | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =10mA, I _B = 1mA | | | 0.5 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C =10mA, I _B = 1mA | | | 1.4 | V |
| Transition frequency | f _T | V _{CE} =5V, I _C = 5mA f=400MHz | | 800 | | MHz |

CLASSIFICATION OF h_{FE}

| Rank | L | H |
|-------|--------|---------|
| Range | 70-105 | 105-190 |

Typical Characteristics

