

TRANSISTOR (NPN)

FEATURES

- For high-frequency Amplification Complementary to 2SA1532
- Optimum for RF amplification of FM/AM radios
- High transition frequency f_T

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 30 | V |
| V_{CEO} | Collector-Emitter Voltage | 20 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 30 | mA |
| P_C | Collector Power Dissipation | 150 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55-150 | $^\circ\text{C}$ |

SOT-323



- 1.BASE
- 2.EMITTER
- 3.COLLECTOR

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|---|---------------|---|-----|-----|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}, I_E=0$ | 30 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=100\mu\text{A}, I_B=0$ | 20 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100\mu\text{A}, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=10\text{V}, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5\text{V}, I_C=0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=10\text{V}, I_C=1\text{mA}$ | 70 | | 220 | |
| Transition frequency | f_T | $V_{CE}=10\text{V}, I_E=1\text{mA}, f=200\text{MHZ}$ | 150 | | | MHZ |
| Common emitter reverse transfer capacitance | C_{re} | $V_{CB}=10\text{V}, I_C=1\text{mA}, f=10.7\text{MHZ}$ | | | 1.5 | pF |
| Noise figure | NF | $V_{CB}=10\text{V}, I_C=1\text{mA}, f=5\text{MHZ}$ | | | 4 | dB |
| Reverse transfer impedance | Z_{rb} | $V_{CB}=10\text{V}, I_C=1\text{mA}, f=2\text{MHZ}$ | | | 50 | Ω |

CLASSIFICATION OF $h_{FE(1)}$

| Marking | VB | VC |
|---------|--------|---------|
| Range | 70-140 | 110-220 |



