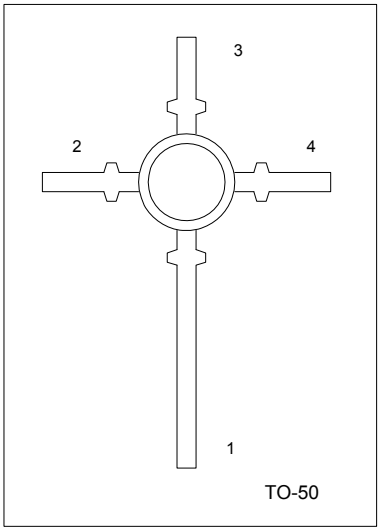
# 2SC3358

**NPN SILICON EPITAXIAL TRANSISTOR**

## HIGH FREQUENCY LOW NOISE AMPLIFIER




## ■ FEATURES

*Low Noise and High Gain
*High Power Gain

## ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | | Packing |
|---|---|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | 3 | 4 | |
| 2SC3358L-T50-R | 2SC3358G-T50-R | TO-50 | C | E | B | E | Tape Reel |

Note: Pin Assignment: C: Collector E: Emitter B: Base

| | |
|---|---|
| 2SC3358G-T50-R<br>(1)Packing Type<br>(2)Package Type<br>(3)Green Package | (1) R: Tape Reel<br>(2) T50: TO-50<br>(3) G: Halogen Free and Lead Free, L: Lead Free |

## ■ ABSOLUTE MAXIMUM RATINGS ($T_C$ = 25°C, unless otherwise stated)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 20 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 12 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 3 | V |
| Collector Current | $I_C$ | 100 | A |
| Total Device Dissipation | $P_D$ | 250 | mW |
| Junction Temperature | $T_J$ | 150 | °C |
| Storage Temperature | $T_{STG}$ | -65 ~ +150 | °C |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ ELECTRICAL CHARACTERISTICS

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=10V, $I_E$=0 | | | 1.0 | μA |
| Emitter Cut-Off Current | $I_{EBO}$ | $V_{EB}$=1V, $I_C$=0 | | | 1.0 | μA |
| DC Current Gain (Note) | $h_{FE}$ | $V_{CE}$=10V, $I_C$=20mA | 50 | | 300 | |
| Transition Frequency | $f_T$ | $V_{CE}$=10V, $I_C$=20mA | | 7 | | GHz |
| Feed-Back Capacitance | Cre | $V_{CB}$=10V, $I_E$=0, f=1.0MHz | | | 1.0 | pF |
| Noise figure | NF | $V_{CE}$=10V, $I_C$=7mA, f=1.0GHz | | | 2.0 | dB |