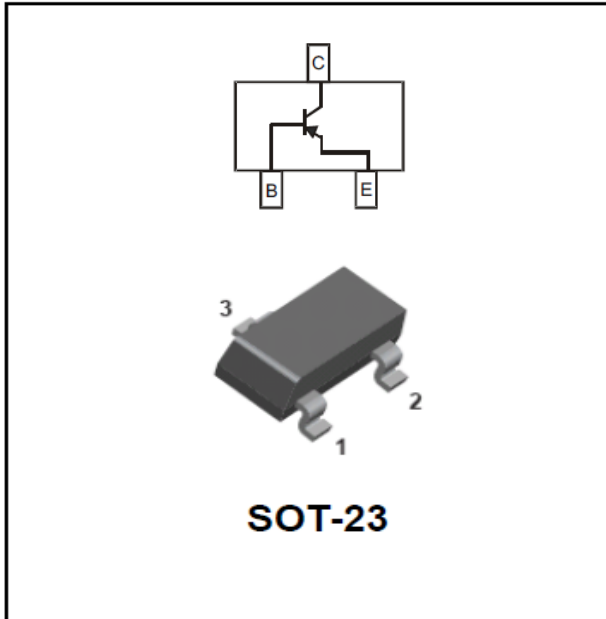


## PNP General Purpose Amplifier



### Features

- Low collector-emitter saturation voltage
- High Conductance
- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1

### Applications

- PNP General Purpose Amplifier

### Mechanical Data

- Case: SOT-23
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: AKR

### ■ Maximum Ratings (Ta=25°C)

| Item  | Symbol          | Unit | Conditions                         | Value       |
|---|-----------------|------|------------------------------------|-------------|
| Collector-Emitter Voltage*                  | $V_{CE0}$       | V    | $I_C = -2\text{mA}$ , $I_B = 0$    | -80         |
| Collector-Base Voltage                      | $V_{CBO}$       | V    | $I_C = -50\mu\text{A}$ , $I_E = 0$ | -80         |
| Emitter-Base Voltage                        | $V_{EBO}$       | V    | $I_E = -50\mu\text{A}$ , $I_C = 0$ | -5          |
| Collector Current                           | $I_C$           | mA   |                                    | -500        |
| Collector Power Dissipation                 | $P_C$           | mW   |                                    | 200         |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | °C/W |                                    | 625         |
| Operation Junction Temperature              | $T_j$           | °C   |                                    | 150         |
| Storage Temperature                         | $T_{stg}$       | °C   |                                    | -55 to +150 |

### ■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| 2SB1198-R     | F2           | Approximate 0.008 | 3000                 | 30000                   | 120000                     | 7" reel       |

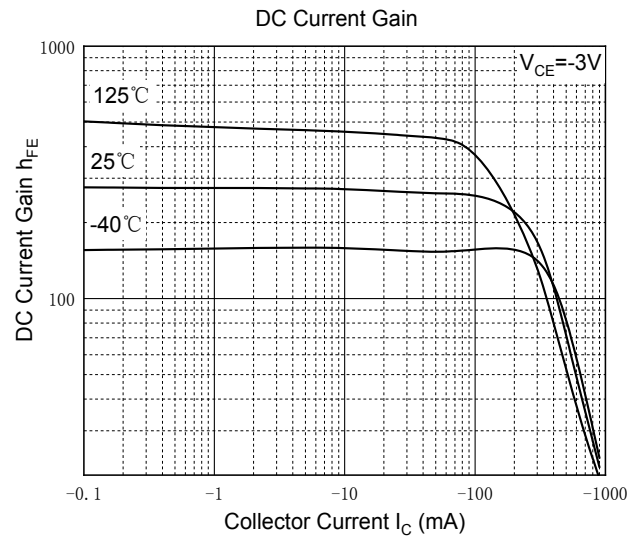
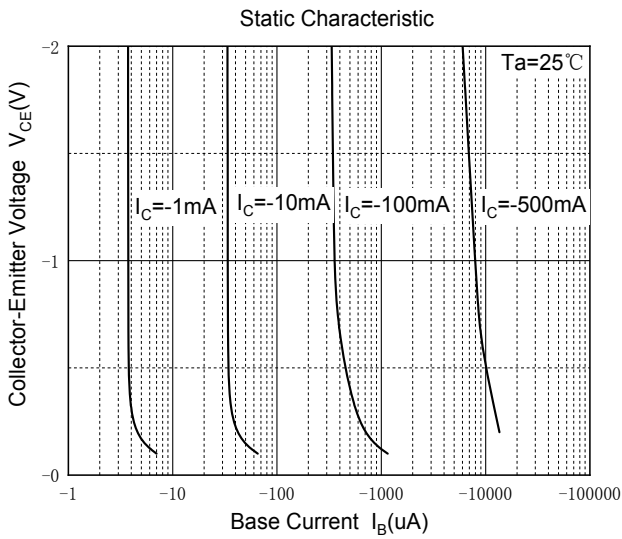


# 2SB1198-R

## ■Electrical Characteristics (Ta=25°C)

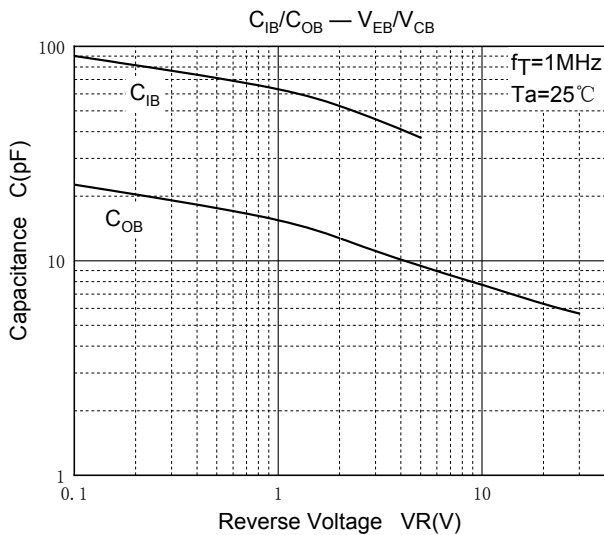
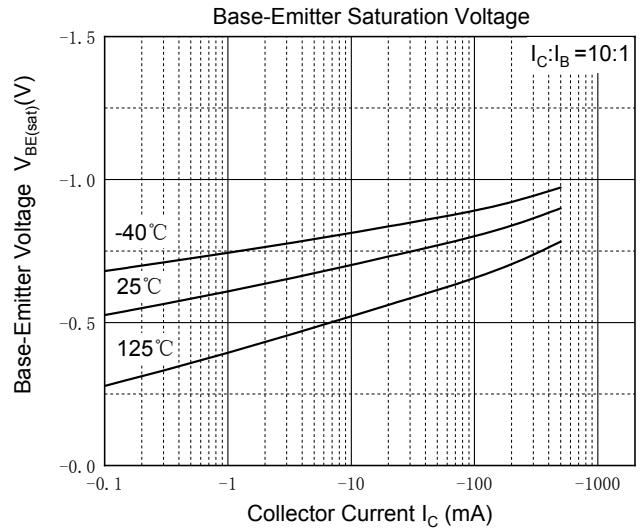
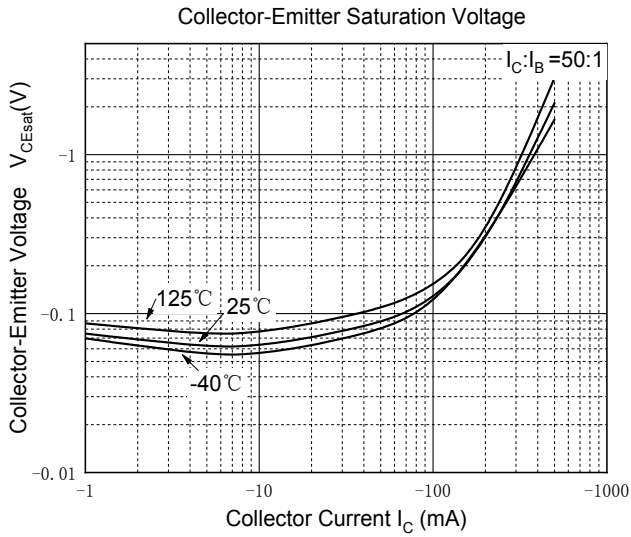
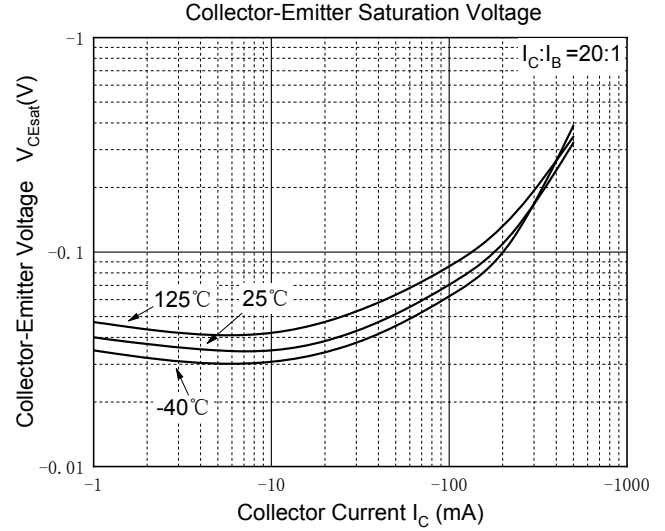
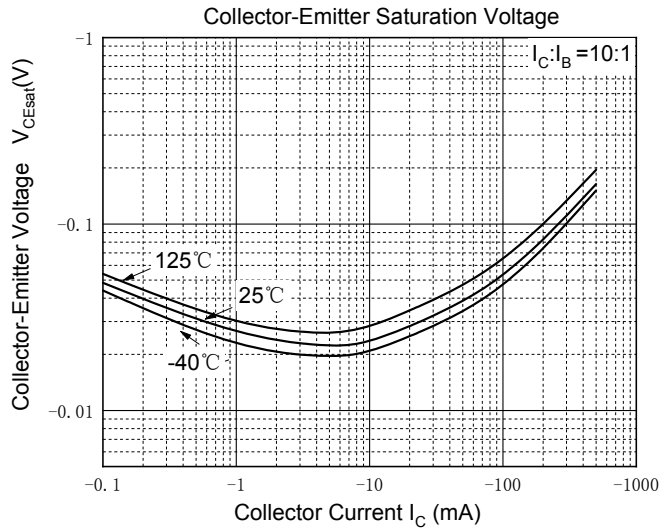
| Item                                 | Symbol        | Unit          | Conditions  | Min | TYP | Max  |
|--------------------------------------|---------------|---------------|---|-----|-----|------|
| Collector-Emitter Voltage            | $V_{CE0}$     | V             | $I_C = -2\text{mA}, I_B = 0$                                  | -80 |     |      |
| Collector-Base Voltage               | $V_{CB0}$     | V             | $I_C = -50\mu\text{A}, I_E = 0$                               | -80 |     |      |
| Emitter-Base Voltage                 | $V_{EB0}$     | V             | $I_E = -50\mu\text{A}, I_C = 0$                               | -5  |     |      |
| Collector-base Cut-off Current       | $I_{CB0}$     | $\mu\text{A}$ | $V_{CB} = -50\text{V}$  |     |     | -0.5 |
| Base-emitter Cut-off Current         | $I_{EB0}$     | $\mu\text{A}$ | $V_{EB} = -4\text{V}$   |     |     | -0.5 |
| DC Current Gain                      | $h_{FE}$      |               | $I_C = -100\text{mA}, V_{CE} = -3\text{V}$                    | 180 |     | 390  |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | V             | $I_C = -500\text{mA}, I_B = -50\text{mA}$                     |     |     | -0.5 |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$ | V             | $I_C = -500\text{mA}, I_B = -50\text{mA}$                     |     |     | -1.2 |
| Transition frequency                 | $f_T$         | MHz           | $I_C = -50\text{mA}, V_{CE} = -10\text{V}, f = 100\text{MHz}$ |     | 180 |      |

## ■Characteristics(Typical)





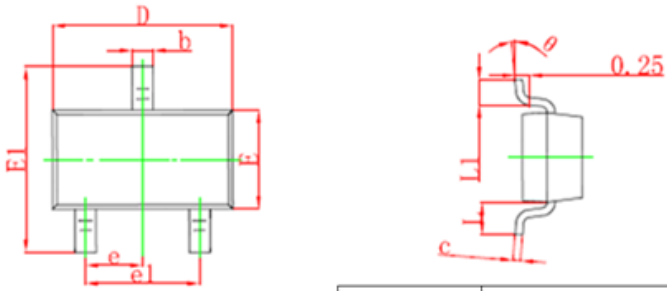
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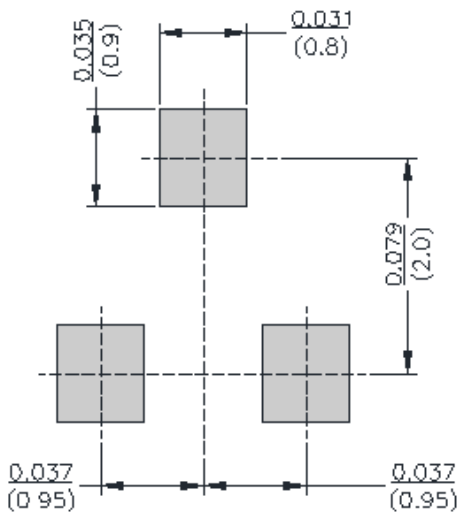
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## ■SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.100                     | 0.200 | 0.004                | 0.008 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950TYP                  |       | 0.037TYP             |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550REF                  |       | 0.022REF             |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## ■SOT-23 Soldering Footprint





## 2SB1198-R

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