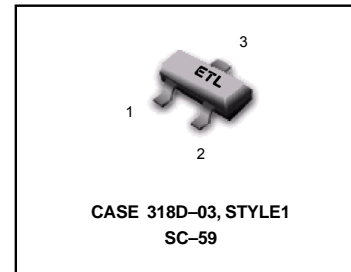
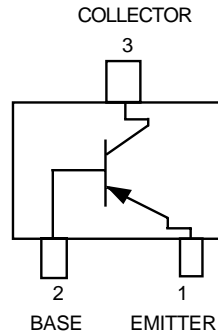


# PNP General Purpose Amplifier Transistor Surface Mount

**MSB709-RT1**



### MAXIMUM RATINGS (T<sub>A</sub> = 25 °C)

| Rating                         | Symbol               | Value | Unit |
|--------------------------------|----------------------|-------|------|
| Collector-Base Voltage         | V <sub>(BR)CBO</sub> | -60   | Vdc  |
| Collector-Emitter Voltage      | V <sub>(BR)CEO</sub> | -45   | Vdc  |
| Emitter-Base Voltage           | V <sub>(BR)EBO</sub> | -7.0  | Vdc  |
| Collector Current - Continuous | I <sub>C</sub>       | -100  | mAdc |
| Collector Current - Peak       | I <sub>C(P)</sub>    | -200  | mAdc |

### THERMAL CHARACTERISTICS

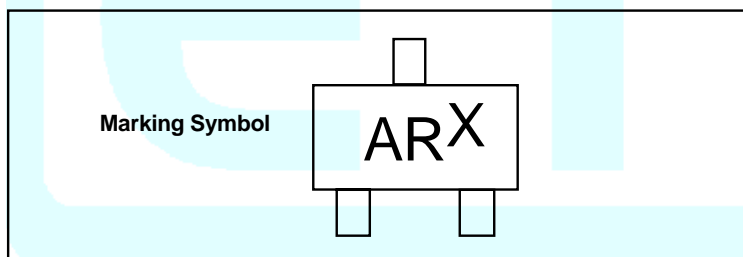
| Characteristic       | Symbol           | Max        | Unit |
|----------------------|------------------|------------|------|
| Power Dissipation    | P <sub>D</sub>   | 200        | mW   |
| Junction Temperature | T <sub>J</sub>   | 150        | °C   |
| Storage Temperature  | T <sub>stg</sub> | -55 ~ +150 | °C   |

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25 °C)

| Characteristic  | Symbol               | Min  | Max  | Unit |
|---|----------------------|------|------|------|
| Collector-Emitter Breakdown Voltage (I <sub>C</sub> = -2.0mAdc, I <sub>B</sub> = 0)           | V <sub>(BR)CEO</sub> | -45  | —    | Vdc  |
| Collector-Base Breakdown Voltage (I <sub>C</sub> = -10μAdc, I <sub>E</sub> = 0)               | V <sub>(BR)CBO</sub> | -60  | —    | Vdc  |
| Emitter-Base Breakdown Voltage (I <sub>E</sub> = -10μAdc, I <sub>C</sub> = 0)                 | V <sub>(BR)EBO</sub> | -7.0 | —    | Vdc  |
| Collector-Base Cutoff Current (V <sub>CB</sub> = -45Vdc, I <sub>E</sub> = 0)                  | I <sub>CBO</sub>     | —    | -0.1 | μAdc |
| Collector-Emitter Cutoff Current (V <sub>CE</sub> = -10Vdc, I <sub>B</sub> = 0)               | I <sub>CEO</sub>     | —    | -100 | nAdc |
| DC Current Gain <sup>(1)</sup><br>(V <sub>CE</sub> = -10Vdc, I <sub>C</sub> = -2.0mAdc)       | h <sub>FE1</sub>     | 210  | 340  | —    |
| Collector-Emitter Saturation Voltage<br>(I <sub>C</sub> = -100mAdc, I <sub>B</sub> = -10mAdc) | V <sub>CE(sat)</sub> | —    | -0.5 | Vdc  |

1. Pulse Test: Pulse Width ≤ 300 μs, D.C. ≤ 2%.

### DEVICE MARKING



The "X" represents a smaller alpha digit Date Code. The Date Code indicates the actual month in which the part was manufactured.