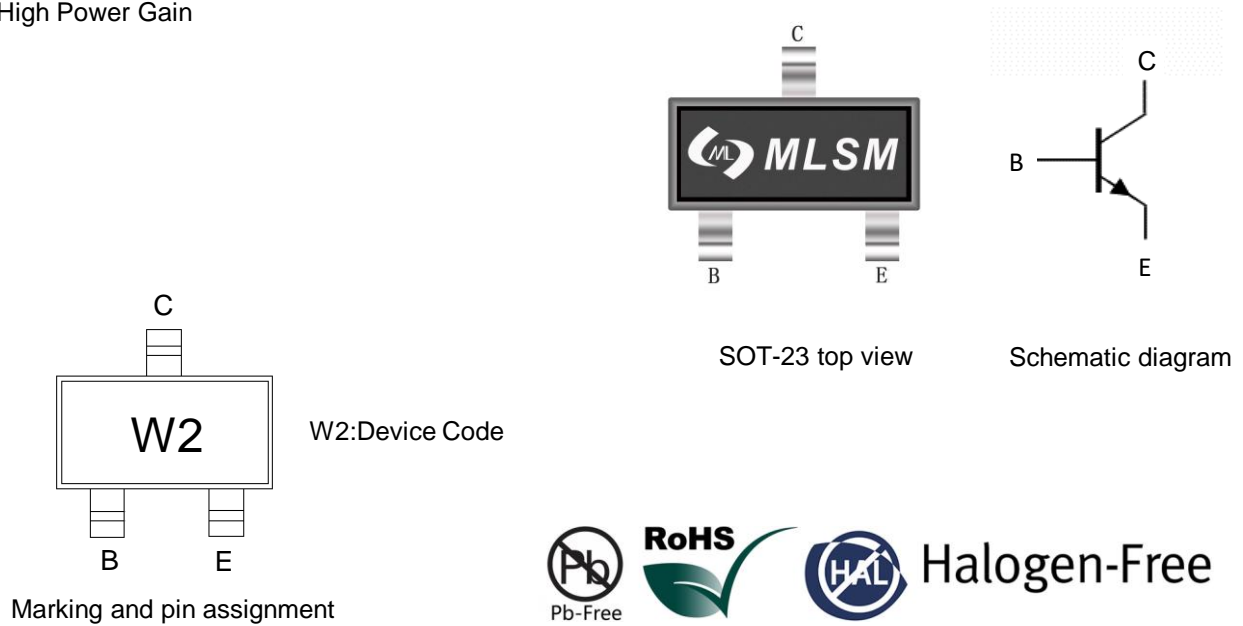


Features

- Low Noise and High Gain
- High Power Gain


Maximum Ratings($T_a=25^{\circ}\text{C}$ unless otherwise noted)

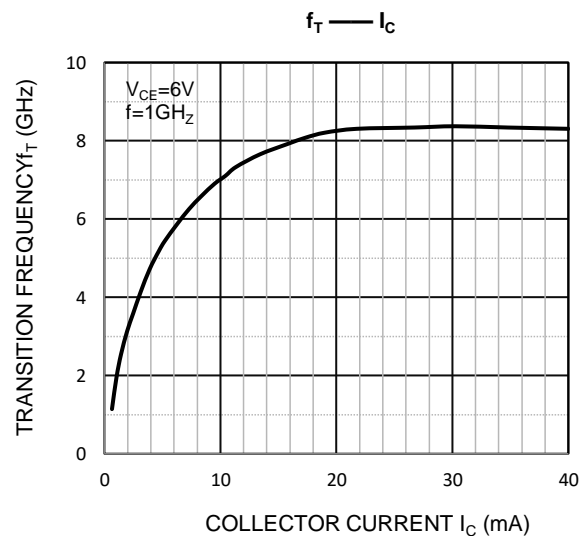
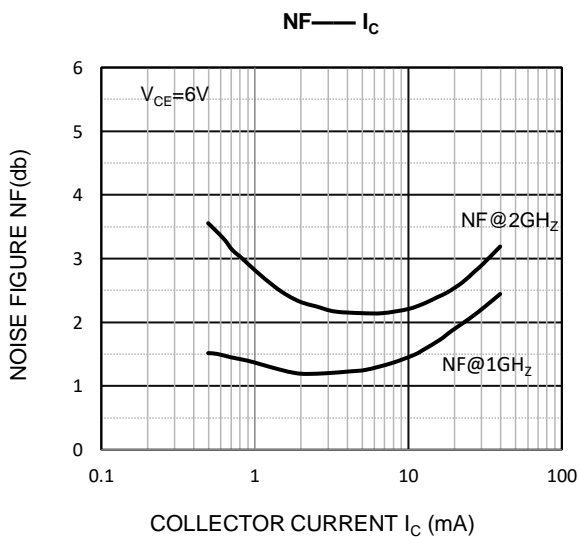
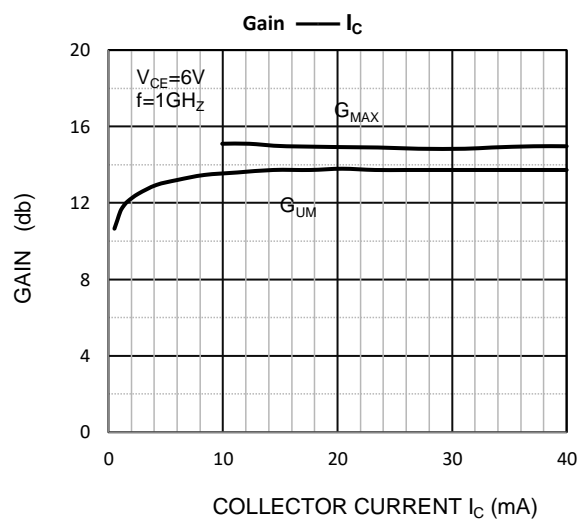
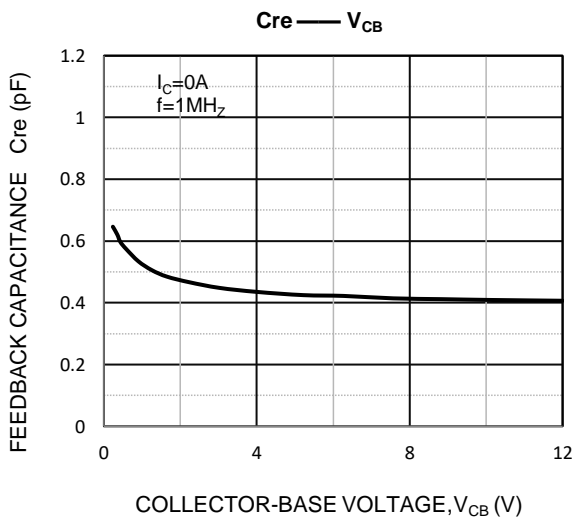
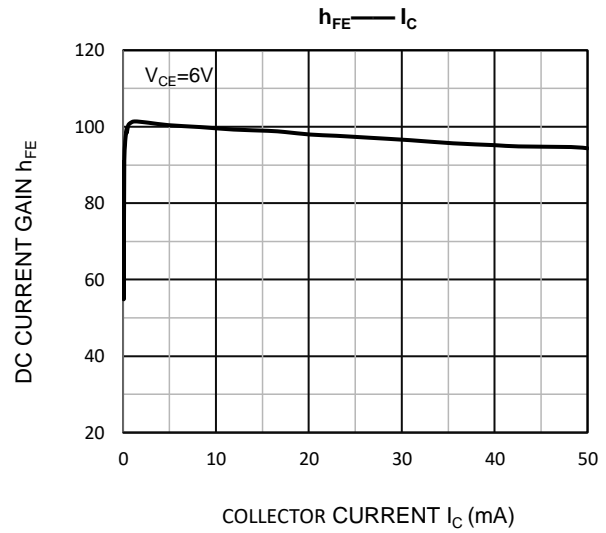
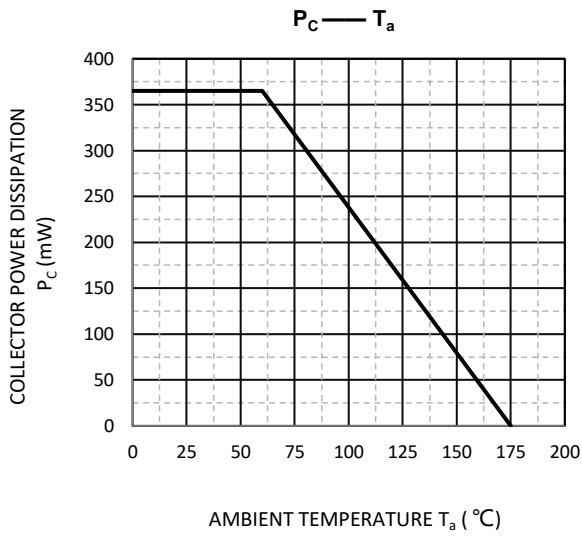
| Symbol | Parameter | Value | Unit |
|--------------------------------|--|----------|----------------------|
| V_{CBO} | Collector-Base Voltage | 20 | V |
| V_{CEO} | Collector-Emitter Voltage | 10 | V |
| V_{EBO} | Emitter-Base Voltage | 1.5 | V |
| I_{C} | Collector Current | 100 | mA |
| P_{C} | Collector Power Dissipation | 365 | mW |
| $R_{\theta\text{JA}}$ | Thermal Resistance From Junction To Ambient | 342 | $^{\circ}\text{C/W}$ |
| $T_{\text{J}}, T_{\text{stg}}$ | Operation Junction and Storage Temperature Range | -55~+150 | $^{\circ}\text{C}$ |

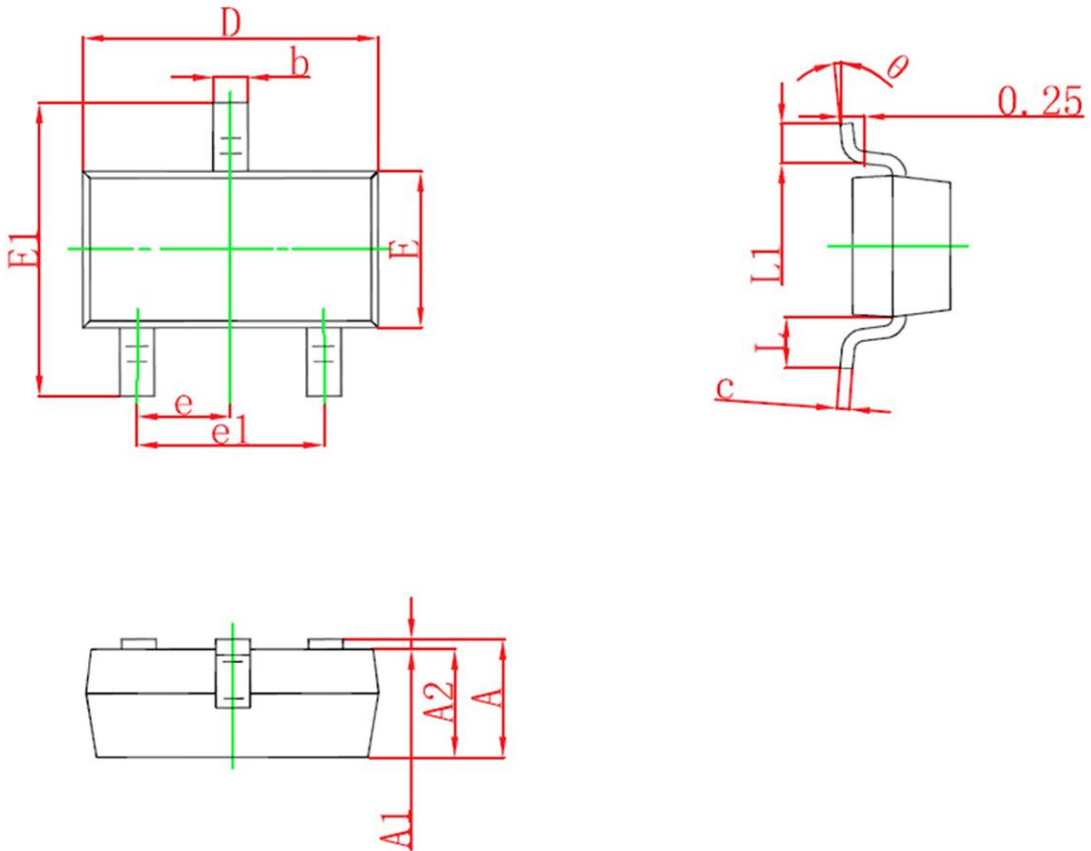
Ordering Information (Example)

| Type | Package | Marking | Minimum Package(pcs) | Inner Box Quantity(pcs) | Outer Carton Quantity(pcs) | Delivery Mode |
|--------|---------|---------|----------------------|-------------------------|----------------------------|---------------|
| PBR951 | SOT-23 | W2 | 3,000 | 45,000 | 180,000 | 7"reel |

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

| Symbol | Parameter | Condition | Min | Typ | Max | Unit |
|---------------|-------------------------------------|-------------------------------|-----|-----|-----|---------|
| $V_{(BR)CBO}$ | Collector-base breakdown voltage | $I_C=100\mu A, I_E=0$ | 20 | -- | -- | V |
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage | $I_C=100\mu A, I_B=0$ | 10 | -- | -- | V |
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage | $I_E=10\mu A, I_C=0$ | 1.5 | -- | -- | V |
| I_{CBO} | Collector cut-off current | $V_{CB}=10V, I_E=0$ | -- | -- | 0.1 | μA |
| I_{EBO} | Emitter cut-off current | $V_{EB}=1V, I_C=0$ | -- | -- | 0.1 | μA |
| h_{FE} | DC current gain | $V_{CE}=6V, I_C=5mA$ | 50 | -- | 200 | |
| | | $V_{CE}=6V, I_C=15mA$ | -- | 100 | -- | |
| N_F | Noise Figure | $V_{CB}=6V, I_C=5mA, f=1GHz$ | -- | 1.3 | -- | dB |
| | | $V_{CB}=6V, I_C=5mA, f=2GHz$ | -- | 2 | -- | dB |
| C_{re} | Feedback capacitance | $V_{CB}=6V, I_C=0mA, f=1MHz$ | -- | 0.4 | -- | pF |
| f_T | Transition frequency | $V_{CE}=6V, I_C=30mA, f=1GHz$ | -- | 8 | -- | GHz |

Typical Operating Characteristics


SOT-23 Package information


| Symbol | Dimensions in Millimeters(mm) | | 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 | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E1 | 2.250 | 2.550 | 0.088 | 0.100 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| e | 0.950TYP | | 0.037TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |