



DTB113Z

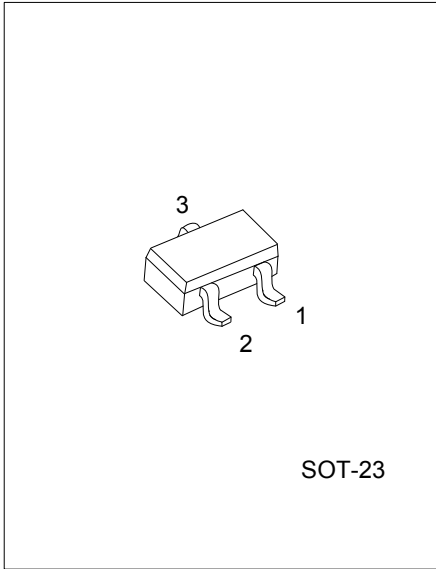
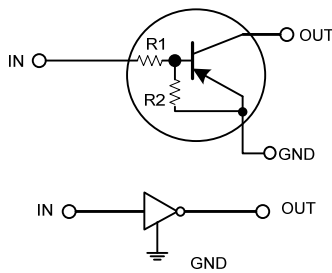
PNP SILICON TRANSISTOR

DIGITAL TRANSISTOR (BUILT-IN RESISTORS)

FEATURES

- * Built-in Bias Resistors that Implies Easy ON/OFF Applications.
- * The Bias Resistors Are Thin-Film Resistors with Complete Isolation to Allow Positive Input.

EQUIVALENT CIRCUIT

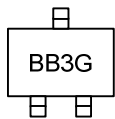


ORDERING INFORMATION

| Order Number | Package | Pin Assignment | | | Packing |
|----------------|---------|----------------|---|---|-----------|
| | | 1 | 2 | 3 | |
| DTB113ZG-AE3-R | SOT-23 | G | I | O | Tape Reel |

| | | |
|----------------|---|--|
| DTB113ZG-AE3-R | (1)Packing Type (2)Package Type (3)Halogen Free | (1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free |
|----------------|---|--|

MARKING



■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|----------------------|-----------|------------|------|
| Supply Voltage | V_{CC} | -50 | V |
| Input Voltage | V_{IN} | -10 ~ +5 | V |
| Output Current | I_C | -500 | mA |
| Power Dissipation | P_D | 200 | mW |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature | T_{STG} | -55 ~ +150 | °C |

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

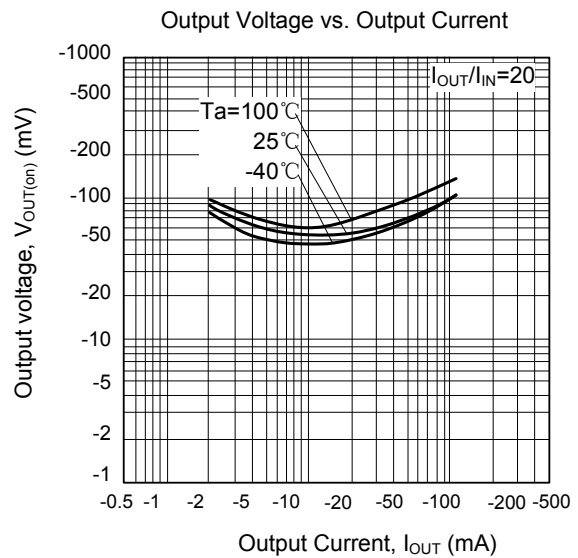
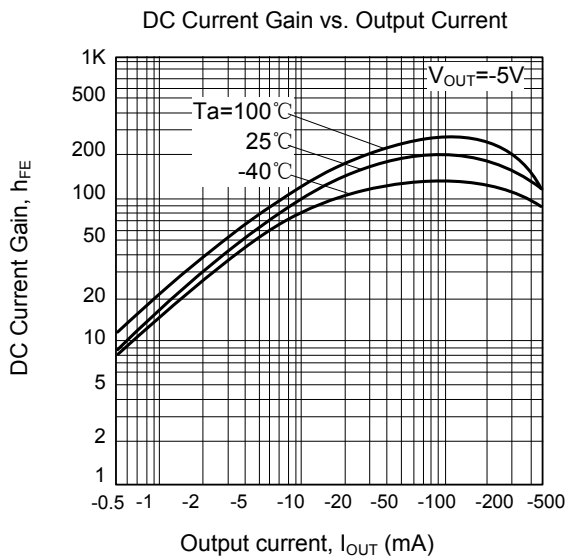
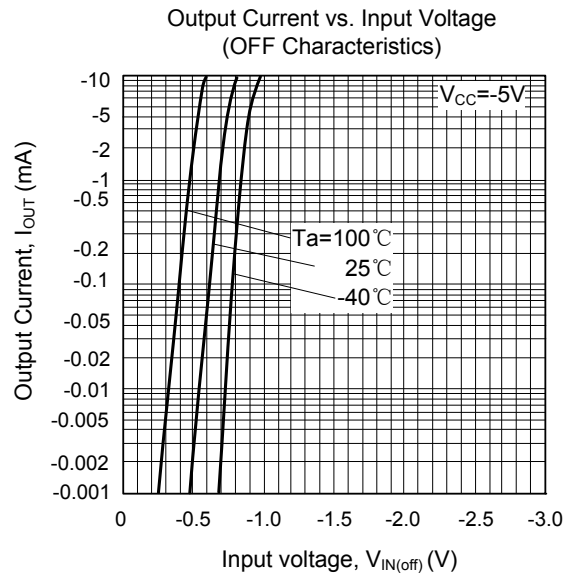
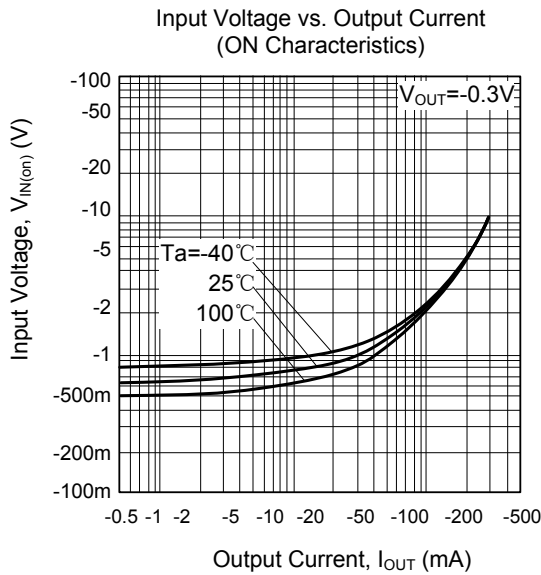
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|----------------------|----------------|--|-----|-----|------|------------|
| Input Voltage | $V_{IN(OFF)}$ | $V_{CC} = -5V, I_{OUT} = -100\mu A$ | | | -0.3 | V |
| | $V_{IN(ON)}$ | $V_{OUT} = -0.3V, I_{OUT} = -20mA$ | -3 | | | |
| Output Voltage | $V_{OUT(ON)}$ | $I_{OUT}/I_{IN} = -50mA/-2.5mA$ | | | -0.3 | V |
| Input Current | I_{IN} | $V_{IN} = -5V$ | | | -7.2 | mA |
| Output Current | $I_{OUT(OFF)}$ | $V_{CC} = -50V, V_{IN} = 0V$ | | | -0.5 | μA |
| DC Current Gain | h_{FE} | $V_{OUT} = -5V, I_{OUT} = -50mA$ | 56 | | | |
| Input Resistance | R_1 | | 0.7 | 1 | 1.3 | K Ω |
| Resistance Ratio | R_2/R_1 | | 8 | 10 | 12 | |
| Transition Frequency | f_T | $V_{CE} = -10V, I_E = 50mA, f = 100MHz(\text{Note})$ | | 200 | | MHz |

Note: Transition frequency of the device

■ TYPICAL CHARACTERISTICS



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