

Features

- **Pb-Free package is available**
 - RoHS product for packing code suffix "G"
 - Halogen free product for packing code suffix "H"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- Only the on/off conditions need to be set for operation, making device design easy

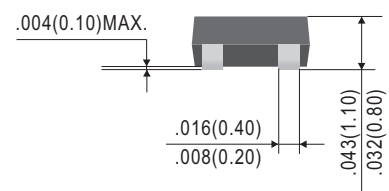
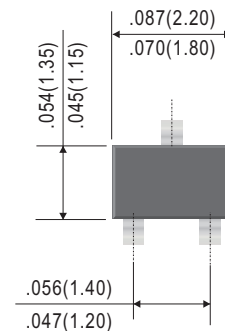
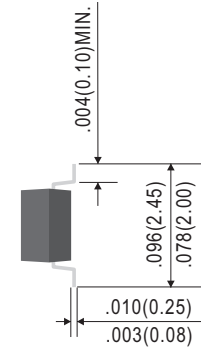
Absolute maximum ratings @ 25°C

| Symbol | Parameter | Min | Typ | Max | Unit |
|-----------------------|----------------------|-----|--------------|-----|------|
| V_{CC} | Supply voltage | --- | -50 | --- | V |
| V_{IN} | Input voltage | -12 | --- | 5 | V |
| I_O $I_{C(MAX)}$ | Output current | --- | -100 -100 | --- | mA |
| P_d | Power dissipation | --- | 200 | --- | mW |
| T_j | Junction temperature | --- | 150 | --- | °C |
| T_{stg} | Storage temperature | -55 | --- | 150 | °C |

Electrical Characteristics @ 25°C

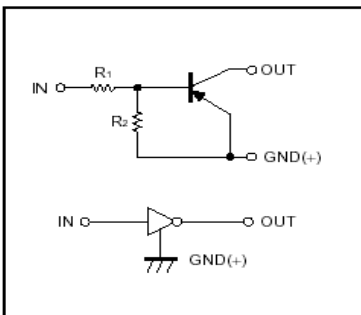
| Symbol | Parameter | Min | Typ | Max | Unit |
|--------------|--|------|-----|------|------------|
| $V_{I(off)}$ | Input voltage ($V_{CC}=-5V, I_O=-100 \mu A$) | -0.5 | --- | --- | V |
| $V_{I(on)}$ | Input voltage ($V_O=-0.3V, I_O=-5mA$) | --- | --- | -1.1 | V |
| $V_{O(on)}$ | Output voltage ($I_O/I_I=-5mA/-0.25mA$) | --- | --- | -0.3 | V |
| I_I | Input current ($V_I=-5V$) | --- | --- | -3.6 | mA |
| $I_{O(off)}$ | Output current ($V_{CC}=-50V, V_I=0$) | --- | --- | -0.5 | μA |
| G_1 | DC current gain ($V_O=-5V, I_O=-10mA$) | 80 | --- | --- | |
| R_1 | Input resistance | 1.54 | 2.2 | 2.86 | K Ω |
| R_2/R_1 | Resistance ratio | 17 | 21 | 26 | |
| f_T | Transition frequency ($V_O=-10V, I_O=5mA, f=100MHz$) | --- | 250 | --- | MHz |

SOT-323



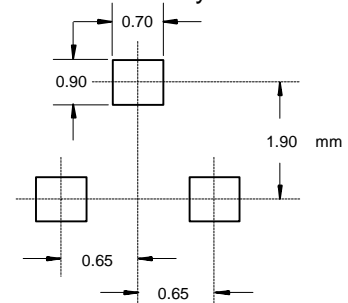
Dimensions in inches and (millimeters)

Equivalent circuit



*Marking: 132

Suggested Solder Pad Layout



● **Electrical characteristic curves**

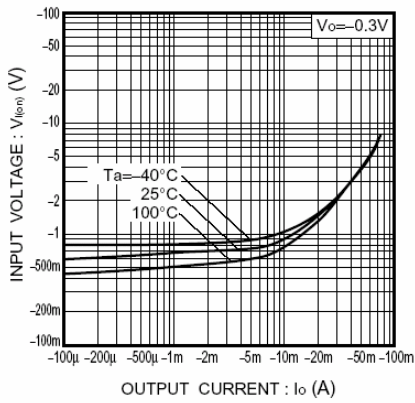


Fig.1 Input voltage vs. output current (ON characteristics)

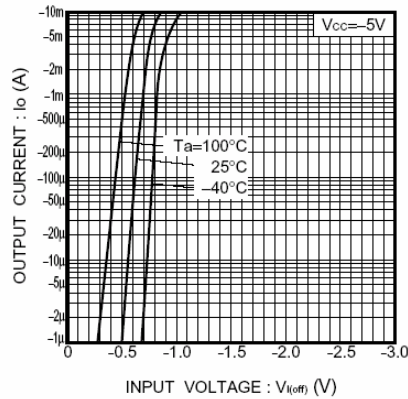


Fig.2 Output current vs. input voltage (OFF characteristics)

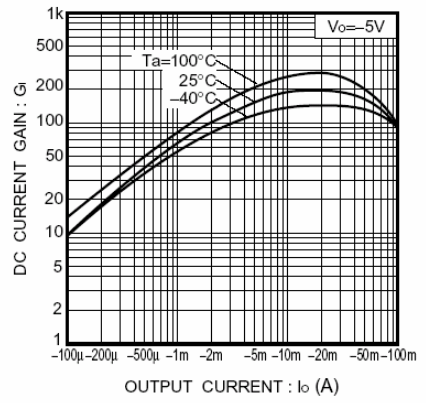


Fig.3 DC current gain vs. output current

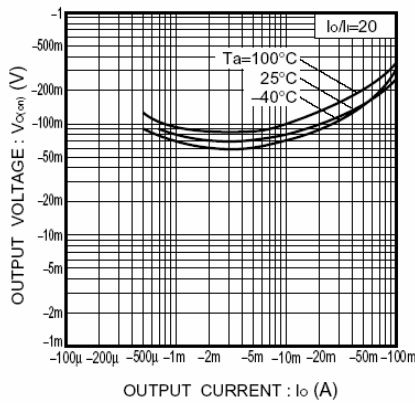


Fig.4 Output voltage vs. output current

Ordering Information:

| Device PN | Packing |
|--|--------------------------|
| DTA123JUA -T ⁽¹⁾ G ⁽²⁾ -WS | Tape & Reel: 3 Kpcs/Reel |

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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