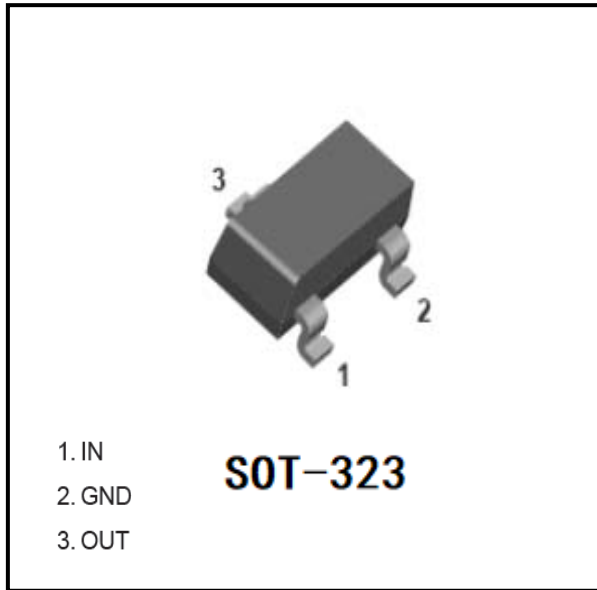


## Digital Transistors (Built-in Resistors)



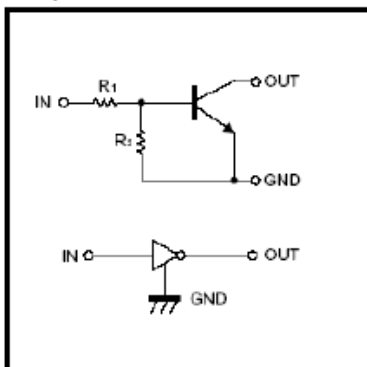
### Features

- 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
- Surface mount package ideally Suited for Automatic Insertion
- PNP

### Mechanical Data

- **Package:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 14

### ■Equivalent circuit



### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

| Item                 | Symbol | Unit | Conditions | Value       |
|----------------------|--------|------|------------|-------------|
| Supply Voltage       | VCC    | V    |            | -50         |
| Input Voltage        | VIN    | V    |            | -40 to +10  |
| Output Current       | IO     | mA   |            | -100        |
| Power Dissipation    | PD     | mW   |            | 200         |
| Junction Temperature | Tj     | °C   |            | 150         |
| Storage Temperature  | TSTG   | °C   |            | -55 to +150 |



## DTA114EUA

### ■ Electrical Characteristics (Ta=25°C unless otherwise specified)

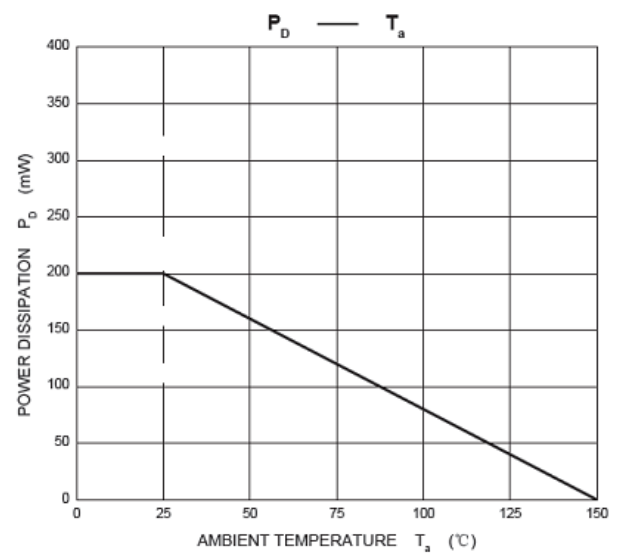
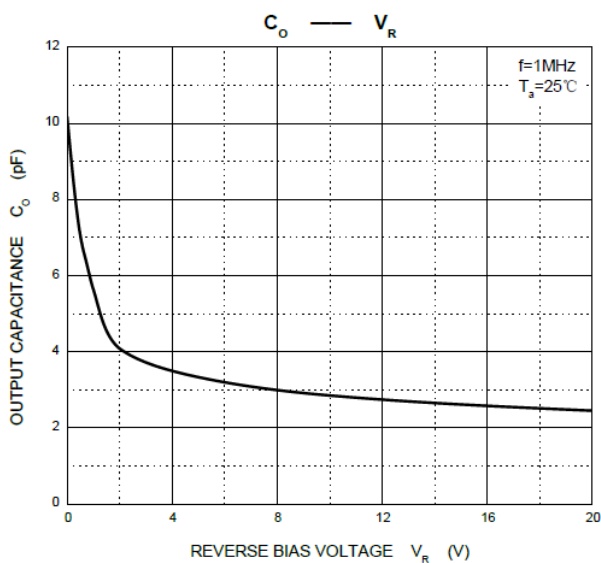
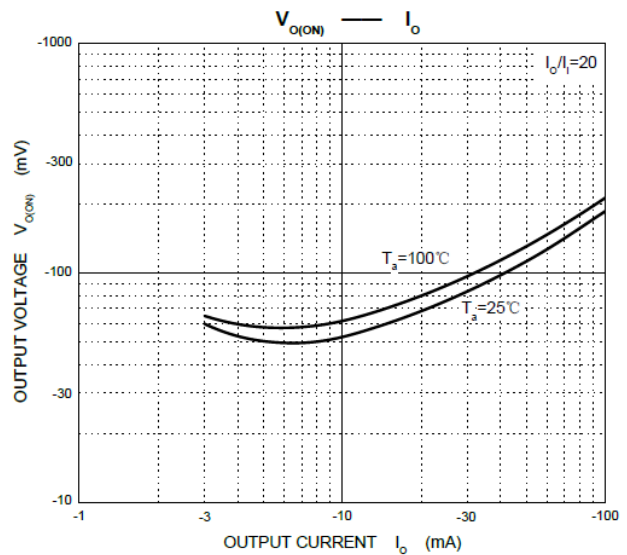
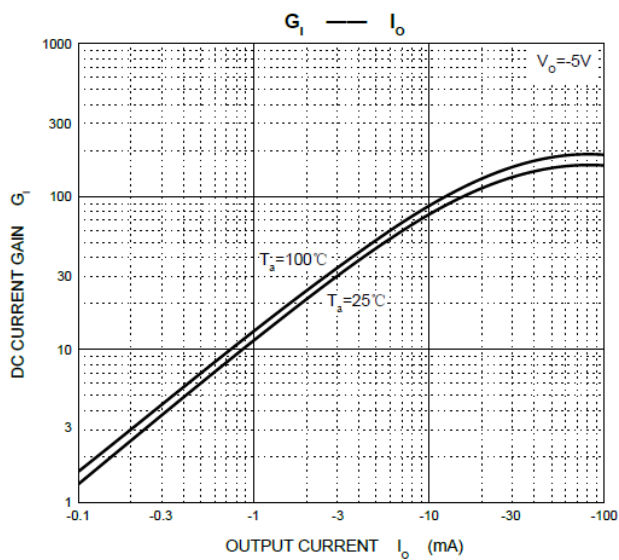
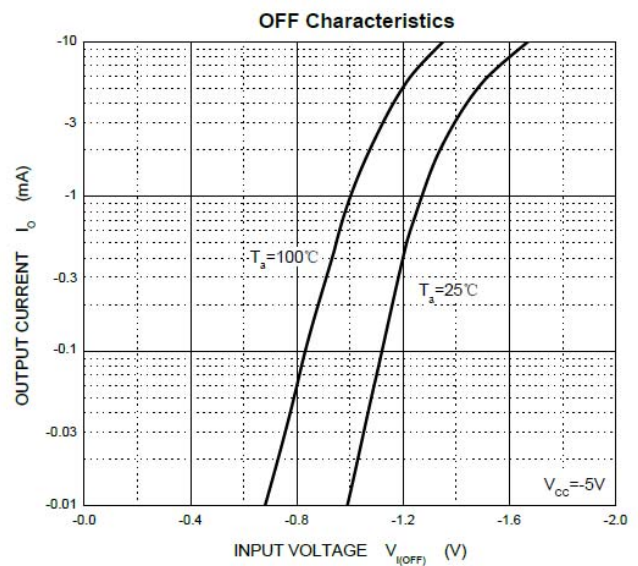
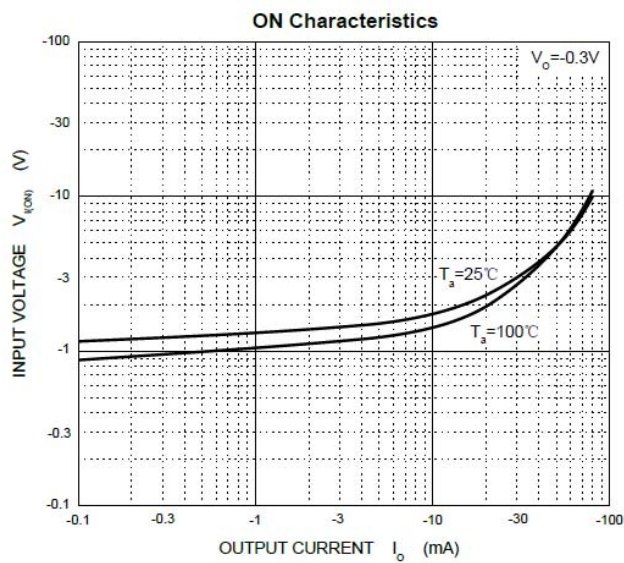
| Item                 | Symbol       | Unit       | Conditions                                            | Min  | Typ | Max  |
|----------------------|--------------|------------|-------------------------------------------------------|------|-----|------|
| Input voltage        | $V_{I(off)}$ | V          | $V_{CC}=-5V, I_c=-100\mu A$<br>$V_0=-0.3V, I_c=-10mA$ | -0.5 |     |      |
|                      | $V_{I(on)}$  | V          |                                                       |      |     | -3   |
| Output voltage       | $V_{O(on)}$  | V          | $I_o / I_i = -10mA / -0.5 mA$                         |      |     | -0.3 |
| Output current       | $I_{O(off)}$ | $\mu A$    | $V_{CC}=-50V, V_i=0$                                  |      |     | -0.1 |
| DC current gain      | GI           |            | $V_o=-5V, I_o = -5mA$                                 | 30   |     |      |
| Input resistance     | $R_1$        | k $\Omega$ |                                                       | 7    | 10  | 13   |
| Resistance ratio     | $R_2/R_1$    |            |                                                       | 0.8  | 1   | 1.2  |
| Transition frequency | fT           | MHz        | $V_o=-10V, I_o=-5mA, f=100MHz$                        |      | 250 |      |

### ■ Ordering Information (Example)

| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| DTA114EUA    | F2           | Approximate 0.005 | 3000                 | 30000                   | 120000                     | 7" reel       |



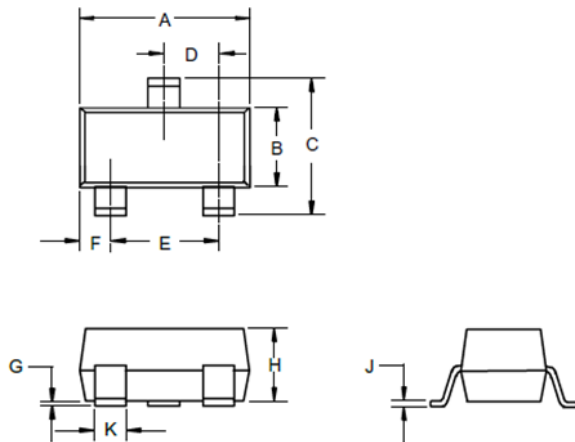
## ■ Characteristics (Typical)





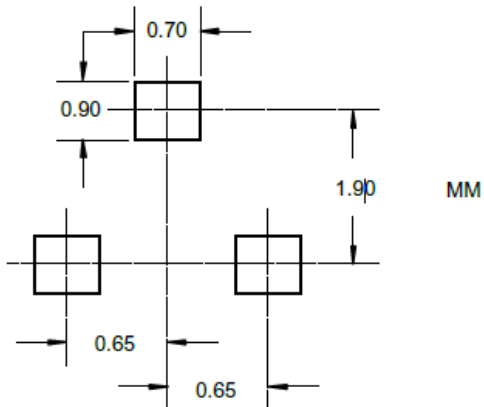
## DTA114EUA

### ■ SOT-323 Package Outline Dimensions



| DIMENSIONS |              |      |             |      |      |
|------------|--------------|------|-------------|------|------|
| DIM        | INCHES       |      | MM          |      | NOTE |
|            | MIN          | MAX  | MIN         | MAX  |      |
| A          | .071         | .087 | 1.80        | 2.20 |      |
| B          | .045         | .053 | 1.15        | 1.35 |      |
| C          | .083         | .096 | 2.10        | 2.45 |      |
| D          | .026 Nominal |      | 0.65Nominal |      |      |
| E          | .047         | .055 | 1.20        | 1.40 |      |
| F          | .012         | .016 | .30         | .40  |      |
| G          | .000         | .004 | .000        | .100 |      |
| H          | .035         | .039 | .90         | 1.00 |      |
| J          | .004         | .010 | .100        | .250 |      |
| K          | .006         | .016 | .15         | .40  |      |

### ■ SOT-323 Suggested Pad Layout





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