



Micro Commercial Components



Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# DTA124EE

## PNP Digital Transistors

### Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- 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
- Halogen free available upon request by adding suffix "-HF"

### Absolute maximum ratings @ 25°C

| Symbol       | Parameter            | Min | Typ  | Max | Unit |
|--------------|----------------------|-----|------|-----|------|
| $V_{CC}$     | Supply voltage       | --- | -50  | --- | V    |
| $V_{IN}$     | Input voltage        | -40 | ---  | 10  | V    |
| $I_O$        | Output current       | --- | -30  | --- | mA   |
| $I_{C(MAX)}$ | Output current       | --- | -100 | --- | mA   |
| $P_d$        | Power dissipation    | --- | 150  | --- | mW   |
| $T_j$        | Junction temperature | --- | 150  | --- | °C   |
| $T_{stg}$    | Storage temperature  | -55 | ---  | 150 | °C   |

### Electrical Characteristics @ 25°C

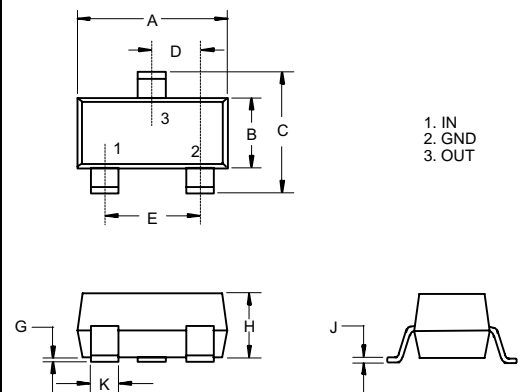
| Symbol       | Parameter   | Min  | Typ | Max   | Unit       |
|--------------|---|------|-----|-------|------------|
| $V_{I(off)}$ | Input voltage ( $V_{CC}=-5V, I_O=-100 \mu A$ )            | ---  | --- | -0.5  | V          |
| $V_{I(on)}$  | Input voltage ( $V_O=0.2V, I_O=-5mA$ )                    | -3.0 | --- | ---   | V          |
| $V_{O(on)}$  | Output voltage ( $I_O/I_I=-10mA/-0.5mA$ )                 | ---  | --- | -0.3  | V          |
| $I_I$        | Input current ( $V_I=-5V$ )                               | ---  | --- | -0.36 | mA         |
| $I_{O(off)}$ | Output current ( $V_{CC}=-50V, V_I=0$ )                   | ---  | --- | -0.5  | $\mu A$    |
| $G_1$        | DC current gain ( $V_O=-5V, I_O=-5mA$ )                   | 56   | --- | ---   |            |
| $R_1$        | Input resistance  | 15.4 | 22  | 28.6  | $K \Omega$ |
| $R_2/R_1$    | Resistance ratio  | 0.8  | 1.0 | 1.2   |            |
| $f_T$        | Transition frequency ( $V_{CE}=-10V, I_E=5mA, f=100MHz$ ) | ---  | 250 | ---   | MHz        |

### Equivalent circuit



\*Marking: 15

### SOT-523



| DIM | INCHES       |      | MM           |      | NOTE |
|-----|--------------|------|--------------|------|------|
|     | MIN          | MAX  | MIN          | MAX  |      |
| A   | .059         | .067 | 1.50         | 1.70 |      |
| B   | .030         | .033 | 0.75         | 0.85 |      |
| C   | .057         | .069 | 1.45         | 1.75 |      |
| D   | .020 Nominal |      | 0.50 Nominal |      |      |
| E   | .035         | .043 | 0.90         | 1.10 |      |
| G   | .000         | .004 | .000         | .100 |      |
| H   | .028         | .031 | .70          | 0.80 |      |
| J   | .004         | .008 | .100         | .200 |      |
| K   | .010         | .014 | .25          | .35  |      |

● Electrical characteristic curves

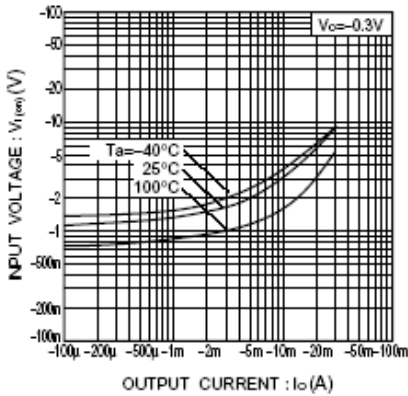


Fig.1 Input voltage vs. output current (ON characteristics)

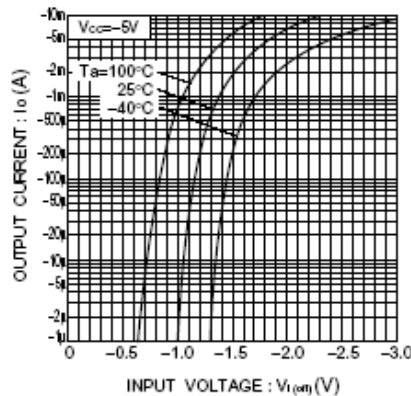


Fig.2 Output current vs. input voltage (OFF characteristics)

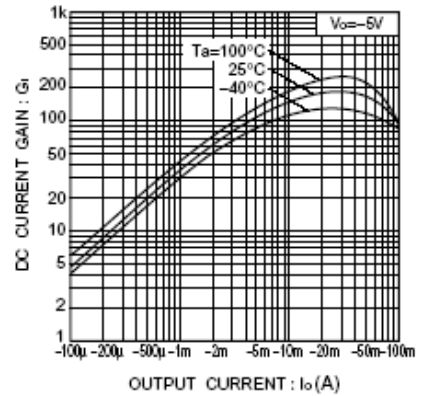


Fig.3 DC current gain vs. output current

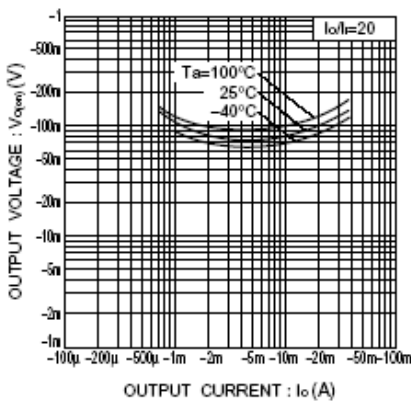


Fig.4 Output voltage vs. output current



TM

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## Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel; 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.