

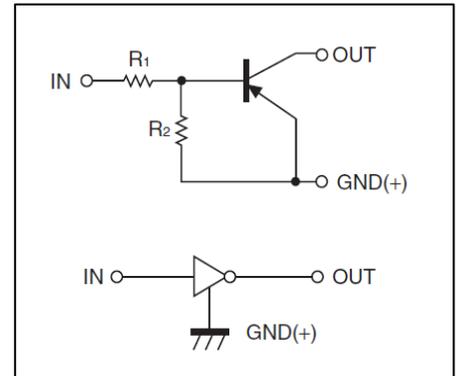
Digital Transistors (Built-in Resistors)

DIGITAL TRANSISTOR (PNP)

FEATURES

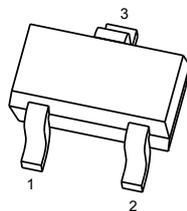
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
- The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input.They also have the advantage of almost completely eliminating parasitic effects
- Only the on/off conditions need to be set for operation, making device design easy

• Equivalent Circuit



PIN CONNENCTIONS and MARKING

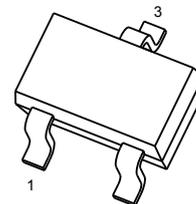
DTA124EE



SOT-523

1. IN
2. GND
3. OUT

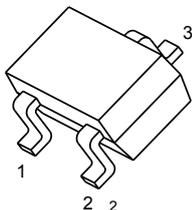
DTA124EUA



SOT-323

1. IN
2. GND
3. OUT

DTA124EKA



SOT-23-3L

1. IN
2. GND
3. OUT

ORDERING INFORMATION

| Part Number | MARKING ⁽¹⁾ | Package | Packing Method | Pack Quantity |
|-------------|------------------------|-----------|----------------|---------------|
| DTA124EE | 15 | SOT-523 | Reel | 3000pcs/Reel |
| DTA124EUA | 15 | SOT-323 | Reel | 3000pcs/Reel |
| DTA124EKA | 15 | SOT-23-3L | Reel | 3000pcs/Reel |

Notes: (1). Solid dot = Green molding compound device, if none, the normal device.

(2). XXX=Code

MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

| Symbol | Parameter | Limits(DTA124E□) | | | Unit |
|------------------|------------------------|------------------|-----|-----|------|
| | | E | UA | KA | |
| V _{CC} | Supply Voltage | -50 | | | V |
| V _{IN} | Input Voltage | -40~+10 | | | V |
| I _O | Output Current | -30 | | | mA |
| I _{CM} | Peak Collector Current | -100 | | | mA |
| P _D | Power Dissipation | 150 | 200 | 200 | mW |
| T _J | Junction Temperature | 150 | | | °C |
| T _{stg} | Storage Temperature | -55~+150 | | | °C |

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

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|----------------------|--------------------------------|--|------|-----|-------|------|
| Input voltage | V _{I(off)} | V _{CC} =-5V, I _O =-100μA | -0.5 | | | V |
| | V _{I(on)} | V _O =-0.2V, I _O =-5 mA | | | -3 | V |
| Output voltage | V _{O(on)} | I _O /I _I =-10mA/-0.5mA | | | -0.3 | V |
| Input current | I _I | V _I =-5V | | | -0.36 | mA |
| Output current | I _{O(off)} | V _{CC} =-50V, V _I =0 | | | -0.5 | μA |
| DC current gain | G _I | V _O =-5V, I _O =-5mA | 56 | | | |
| Input resistance | R ₁ | | 15.4 | 22 | 28.6 | kΩ |
| Resistance ratio | R ₂ /R ₁ | | 0.8 | 1 | 1.2 | |
| Transition frequency | f _T | V _O =-10V, I _O =-5mA, f=100MHz | | 250 | | MHz |

Typical Characteristics

