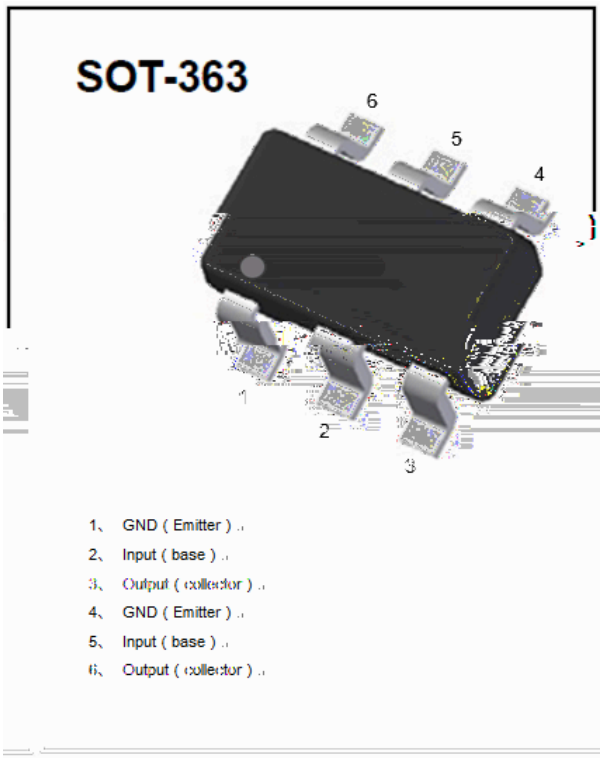
# Dual NPN Digital Transistors (Built-in Resistors)



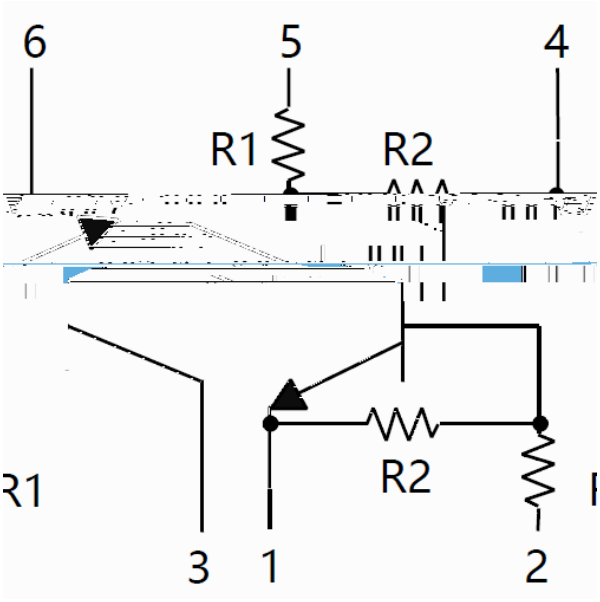

## Features

- Epoxy meets UL-94 V-0 flammability rating
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- Surface mount package ideally Suited for Automatic Insertion

## Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**H10

## ■Equivalent circuit



## ■Maximum Ratings (Ta=25 Unless otherwise specified

| ITEM | SYMBOL | UNIT | CONDITIONS | VALUE |
|---|---|---|---|---|
| Supply Voltage | $V_{CC}$ | V | | 50 |
| Input Voltage | $V_{IN}$ | V | | -5 to +12 |
| Output Current | $I_O$ | mA | | 100 |
| Power Dissipation | $P_D$ | mW | | 150 |
| Junction Temperature Single | Tj | | | 150 |
| Storage Temperature | $T_{STG}$ | | | -55 to +150 |

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

| ITEM | SYMBOL | UNIT | CONDITIONS | MIN | TYP | MAX |
|---|---|---|---|---|---|---|
| Input voltage | $VI_{(off)}$ | V | $V_{CC}$=5V,Ic=100uA | 0.5 | - | - |
| | $VI_{(on)}$ | V | $V_O$=0.3V,Ic=5mA | - | - | 1.1 |
| Output voltage | $Vo_{(on)}$ | V | Io /Ii =5mA/0.25 mA | - | - | 0.3 |
| Input current | $I_I$ | mA | $V_I$=5V | - | - | 3.6 |
| Output current | $I_{O(off)}$ | uA | $V_{CC}$=50V, Vi=0 | - | - | 0.5 |
| DC current gain | $G_I$ | | Vo=5V, Io =10mA | 80 | - | - |
| Input resistance | $R_1$ | kΩ | | 1.54 | 2.2 | 2.86 |
| Resistance ratio | $R_2/R_1$ | | | 17 | 21 | 26 |
| Transition frequency | $f_T$ | MHz | $V_{CE}$=10V,$I_E$=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 |
|---|---|---|---|---|---|---|
| UMH10N | F2 | Approximate 0.009g | 3000 | 30000 | 120000 | 7” reel |

■ **Characteristics** (Typical)

Fig. 1 - DC Current Gain Characteristics

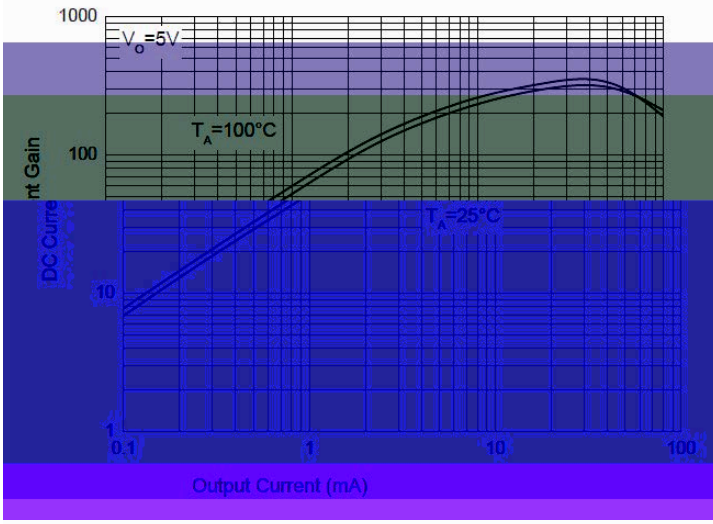



Fig. 2 - Input Voltage (on) Characteristics

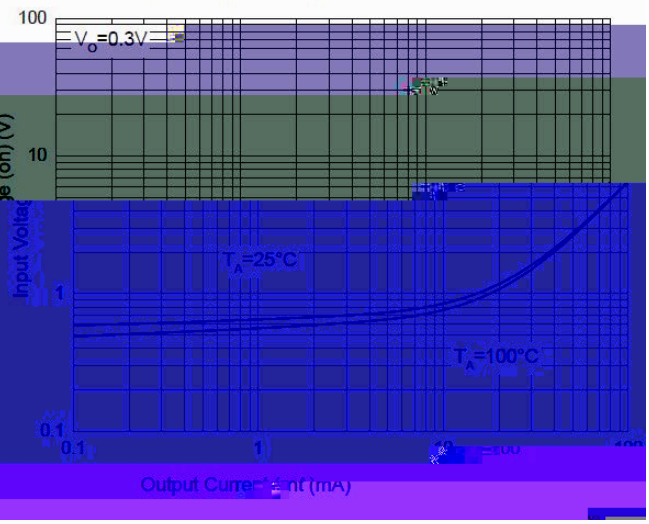



Fig. 3 - Input Voltage (off) Characteristics

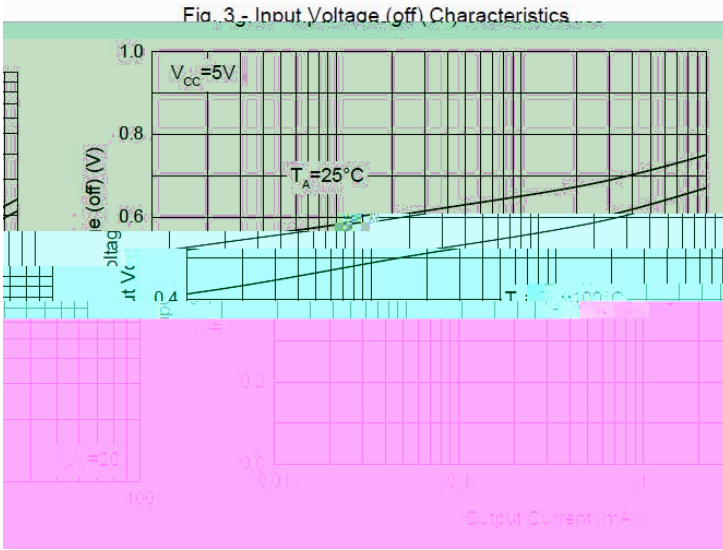
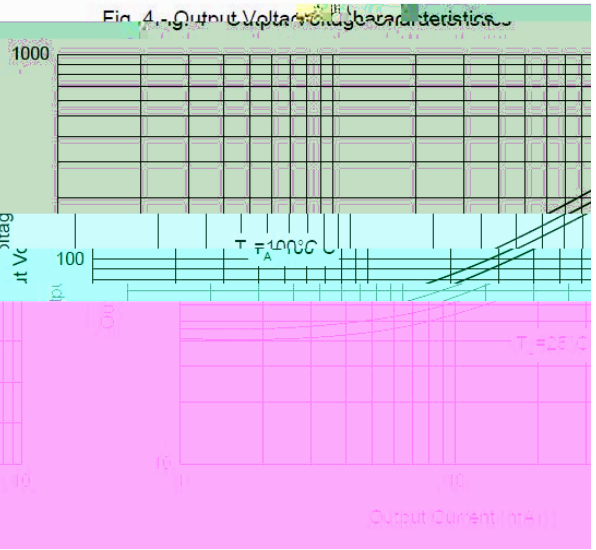
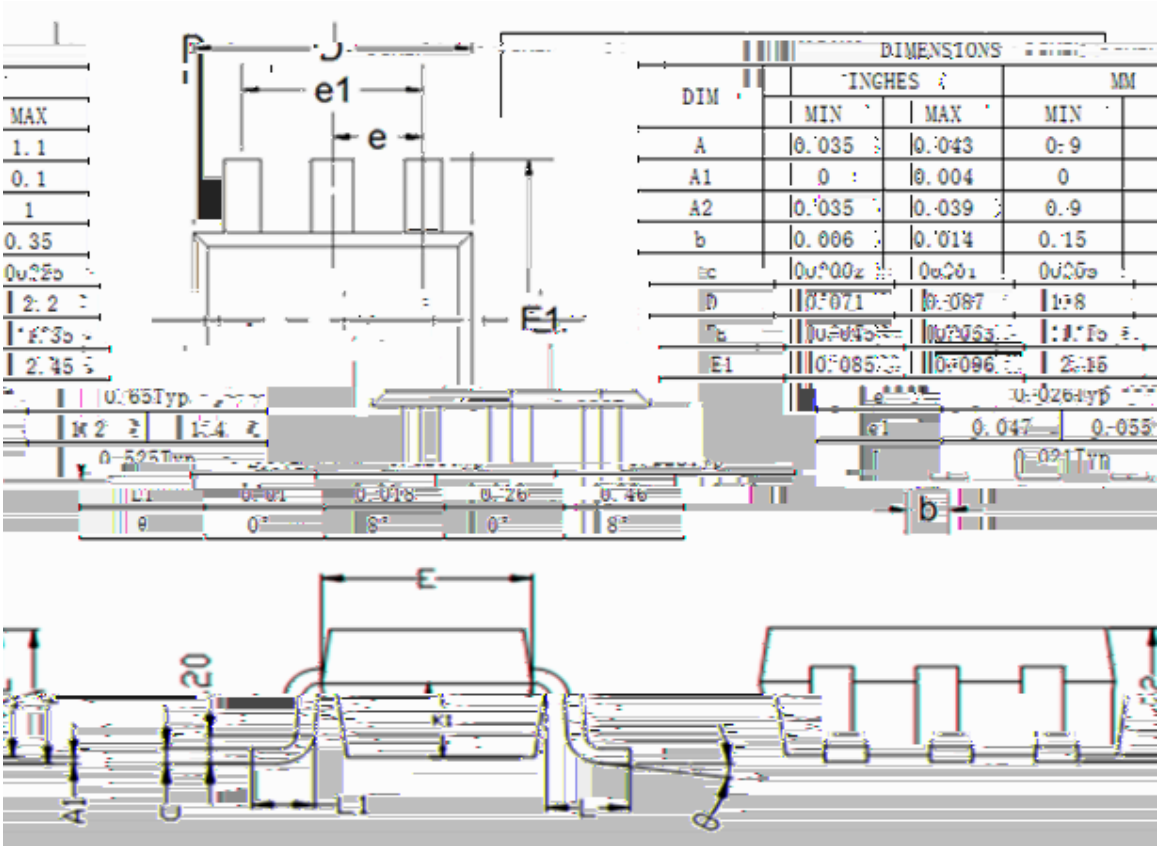


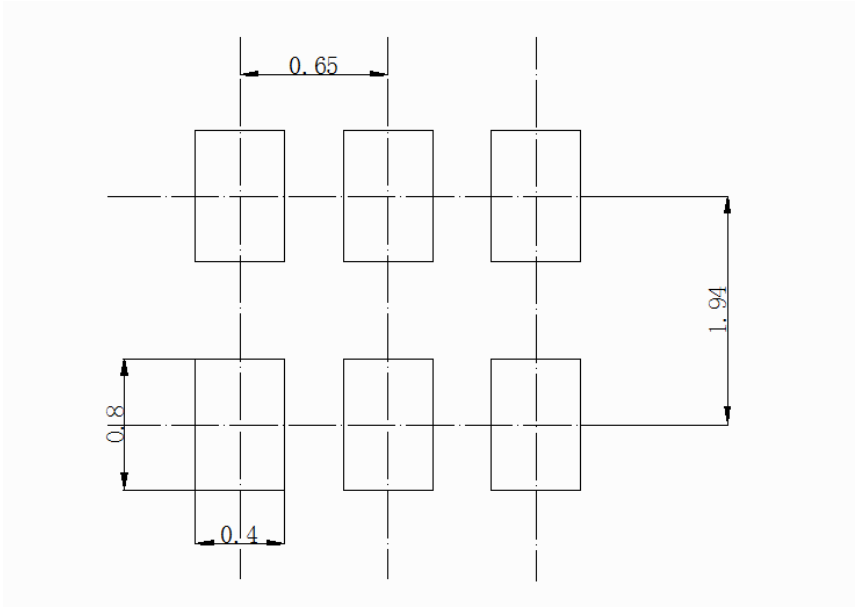

Fig. 4 - Output Voltage Characteristics



## ■SOT-363 Package Outline Dimensions




## ■SOT-363 Suggested Pad Layout




Unit mm

## Disclaimer

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