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LB1205M

Monolithic Digital IC

High-Voltage, Large-Current Darlington Driver

Overview

The LB1205M is a 4-unit, high withstand voltage (65V), large-current (1.5A) Darlington driver array with input low active configuration and sync output.

Features

- 4-unit, high withstand voltage design (65V), large-current (1.5A) Darlington driver.
- PNP input type (low active).
- On-chip spark killer diodes.
- On-chip input protection diodes.
- Capable of being driven directly from 5V operated CMOS, TTL.

Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------------|--------------|--------------------------------|-------------------------------|------------------|
| Maximum supply voltage | V_{DD} max | | 7.0 | V |
| | V_{CC} max | | 62 | V |
| Output supply voltage | V_O max | | 65 | V |
| Input supply voltage | V_{IN} max | $V_{IN} \geq \text{GND}$ | $V_{DD}-7.0$ to $V_{DD}-10.0$ | V |
| Output current | I_O max | | 1.5 | A |
| Spark killer diode forward current | I_{FS} | | 1.5 | A |
| Allowable power dissipation | P_d max | Independent IC | 0.65 | W |
| | | Mounted on the recommended PCB | 1.7 | W |
| Operating temperature | T_{opr} | | -20 to +75 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -55 to +150 | $^\circ\text{C}$ |

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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Allowable Operating Conditions at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Ratings | Unit |
|---------------------------|-------------|---|-------------------------------|------|
| Supply voltage range | V_{DD} | | 3.5 to 7.0 | V |
| Input "ON" level voltage | V_{INon} | $V_{IN} \geq \text{GND}, I_O = 1.0\text{A}$ | $V_{DD}-7.0$ to $V_{DD}-2.6$ | V |
| Input "OFF" level voltage | V_{INoff} | $I_O \leq 30\mu\text{A}$ | $V_{DD}-0.3$ to $V_{DD}+10.0$ | V |

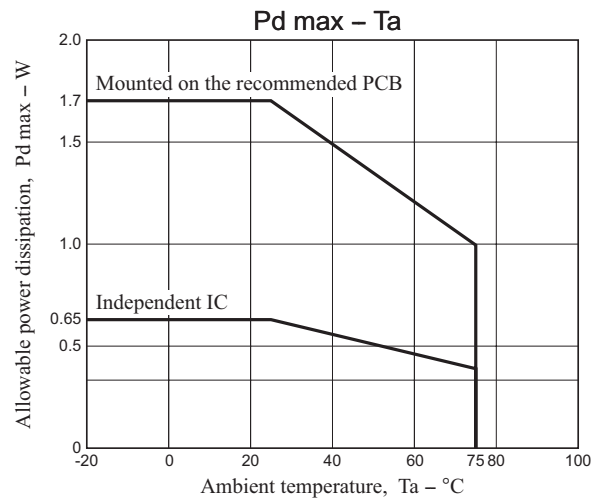
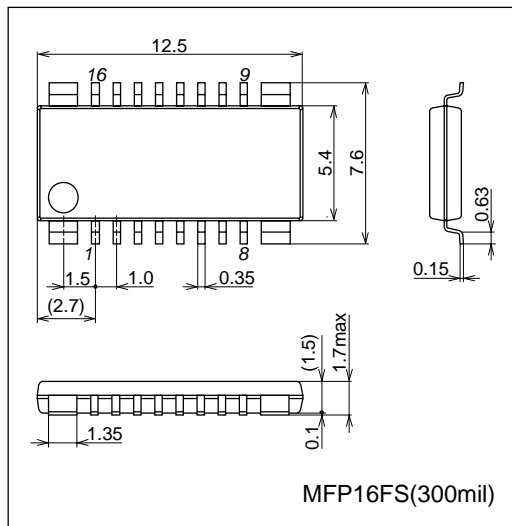
Electrical Characteristics at $T_a = 25^\circ\text{C}, V_{DD} = 5\text{V}$

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|------------------------------------|-------------|---|---------|-----|-----|---------------|
| | | | min | typ | max | |
| Output saturation voltage | V_{Osat1} | $V_{IN} = V_{DD}-5.0\text{V}, I_O = 0.5\text{A}$ | | | 1.2 | V |
| | V_{Osat2} | $V_{IN} = V_{DD}-5.0\text{V}, I_O = 1.0\text{A}$ | | | 1.5 | V |
| | V_{Osat3} | $V_{IN} = V_{DD}-5.0\text{V}, I_O = 1.5\text{A}$ | | | 2.0 | V |
| Output sustain voltage | V_{Osus} | $I_O = 100\text{mA}$ | 65 | | | V |
| Input current | I_{IN} | $V_{DD} = 7.0\text{V}, V_{IN} = V_{DD}-7.0\text{V}$ | | | 1.0 | mA |
| Spark killer diode forward voltage | V_{FS} | $I_{FS} = 1.5\text{A}$ | | | 3.0 | V |
| Spark killer diode reverse current | I_{RS} | $V_{CC} = 62\text{V}, V_O = 0\text{V}$ | | | 30 | μA |

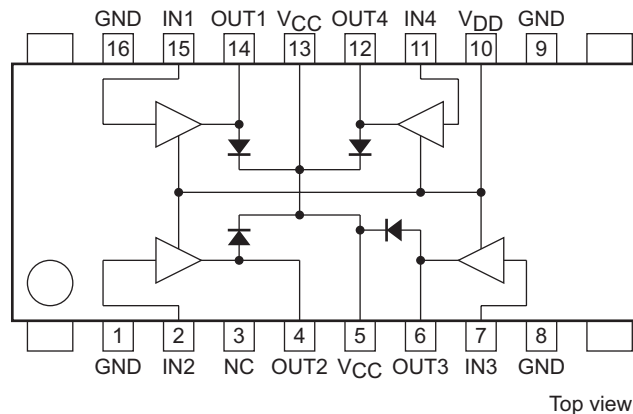
Package Dimensions

unit : mm (typ)

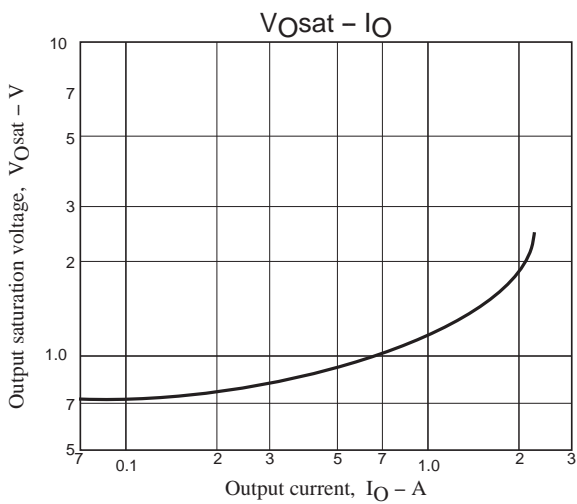
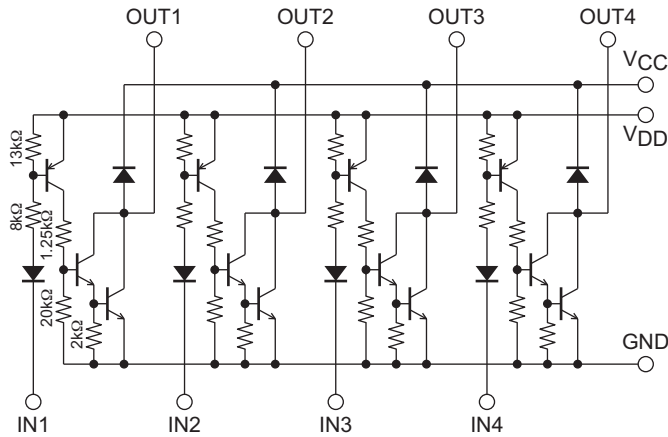
3097B



Pin Assignment



Equivalent Circuit



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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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