



High-Voltage/Large-Current Darlington Driver

Overview

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

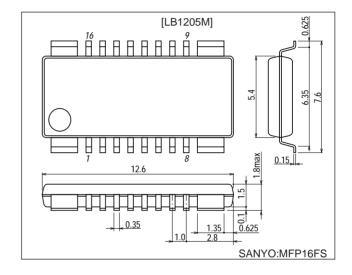
Features

- 4-channel, high withstand voltage design (65V), large-current (1.5A) Darlington driver.
- PNP input type (low active)
- Built-in spark killer diode
- Built-in input protection diode
- Direct drive capable with 5V TTL, CMOS output

Package Dimensions

unit:mm

3097-MFP16FS



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{DD} max		7.0	V
	V _{CC} max		62	V
Applied output voltage	V _O max		65	V
Applied input voltage	V _{IN} max	V _{IN} ≥GND	$V_{DD} - 7.0 \text{ to } V_{DD} + 10.0$	V
Output current	I _O max		1.5	Α
Spark killer diode forward current	I _{FS}		1.5	Α
Allowable power dissipation	Pd max	1.7W when mounted on a recommended PCB	0.63	W
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-55 to +150	°C

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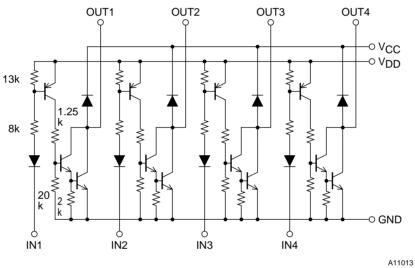
Allowable Operating Ranges at $Ta = 25^{\circ}C$

Parameter	Symbol	Conditions	Ratings	Unit
Power supply voltage	V _{DD}		3.5 to 7.0	V
Input ON level voltage	V _{INon}	V _{IN} ≥ GND, I _O = 1.0A	$V_{DD} - 7.0 \text{ to } V_{DD} - 2.6$	V
Input OFF level voltage	V _{INoff}	I _O ≤ 30 μA	$V_{DD} - 0.3 \text{ to } V_{DD} + 10.0$	V

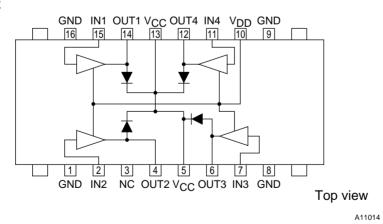
Electrical Characteristics at Ta = 25°C, $V_{DD} = 5.0$ V

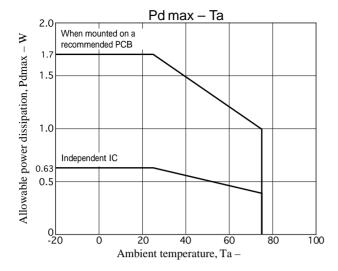
Parameter	0	O constitution on	Ratings			11.3
	Symbol	Conditions	min	typ	max	Unit
Output saturation voltage	V _O (sat)1	$V_{IN} = V_{DD} - 5.0V, I_{O} = 0.5A$			1.2	V
	V _O (sat)2	$V_{IN} = V_{DD} - 5.0V, I_{O} = 1.0A$			1.5	V
	V _O (sat)3	$V_{IN} = V_{DD} - 5.0V, I_{O} = 1.5A$			2.0	٧
Output sustain voltage	V _O sus	I _O = 100 mA	65			V
Input current	I _{IN}	$V_{DD} = 7.0V, V_{IN} = V_{DD} - 7.0V$			1.0	mA
Spark killer diode forward current	V _{FS}	I _{FS} = 1.5A			3.0	V
Spark killer backward voltage	I _{RS}	$V_{CC} = 62V, V_{O} = 0V$			30	μΑ

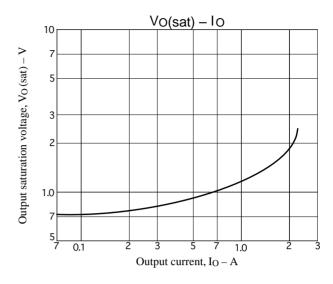
Equivalent Circuit



Pin Assignment







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