

SANYO Semiconductors DATA SHEET

An ON Semiconductor Company

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 $Ta = 25^{\circ}C$

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	$V_{IN} \ge GND$	V _{DD} -7.0 to V _{DD} -10.0	V
Output current	I _O max		1.5	А
Spark killer diode forward current	IFS		1.5	А
Allowable power dissipation	Pd max	Independent IC	0.65	W
		Mounted on the recommended PCB	1.7	W
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-55 to +150	°C

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LB1205M

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

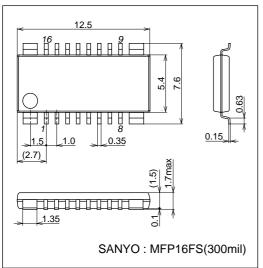
Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage range	V _{DD}		3.5 to 7.0	V
Input "ON" level voltage	V _{IN} on	$V_{IN} \ge GND, I_O = 1.0A$	V _{DD} -7.0 to V _{DD} -2.6	V
Input "OFF" level voltage	V _{IN} off	$I_{O} \leq 30 \mu A$	V _{DD} -0.3 to V _{DD} +10.0	V

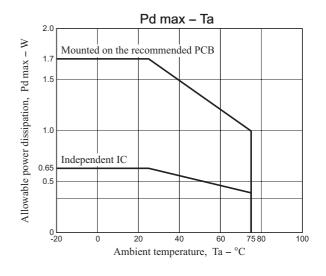
Electrical Characteristics at Ta = 25 °C, $V_{DD} = 5V$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Output saturation voltage	V _O sat1	$V_{IN} = V_{DD}$ -5.0V, I _O = 0.5A			1.2	V
	V _O sat2	$V_{IN} = V_{DD}$ -5.0V, $I_{O} = 1.0A$			1.5	V
	V _O sat3	$V_{IN} = V_{DD}$ -5.0V, $I_{O} = 1.5A$			2.0	V
Output sustain voltage	V _O sus	I _O = 100mA	65			V
Input current	IIN	$V_{DD} = 7.0V, V_{IN} = V_{DD} - 7.0V$			1.0	mA
Spark killer diode forward voltage	V _{FS}	I _{FS} = 1.5A			3.0	V
Spark killer diode reverse current	I _{RS}	$V_{CC} = 62V, V_O = 0V$			30	μA

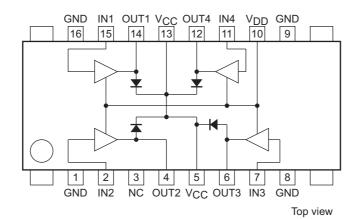
Package Dimensions

unit : mm (typ) 3097B



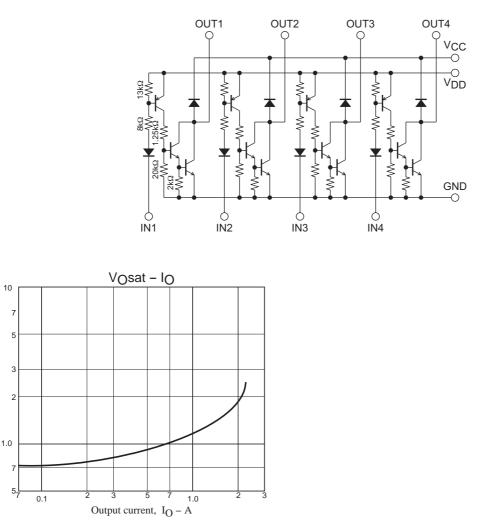


Pin Assignment



Equivalent Circuit

Output saturation voltage, Vosat - V



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