Ordering number : EN1831F

LB1205

Monolithic Digital IC

High-Voltage, Large-Current Darlington Driver

ON Semiconductor®

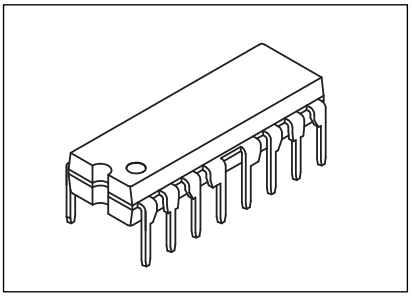
http://onsemi.com

Overview

The LB1205 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.



DIP16F(300mil)

Specifications

Absolute Maximum Ratings at Ta = 25°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	$V_{IN} \geq$ 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	Pd max	Independent IC	1.9	W
		Mounted on the recommended PCB	2.6	W
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-55 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Allowable Operating Conditions at Ta = 25°C

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

Functional operation above the stresses listed in the Recommended Operating Ranges is not implied. Extended exposure to stresses beyond the Recommended Operating Ranges limits may affect device reliability.

ORDERING INFORMATION

See detailed ordering and shipping information on page 4 of this data sheet.

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/O1995YK/7097KI/6265KI/D203KI,TS No.1831-1/4

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

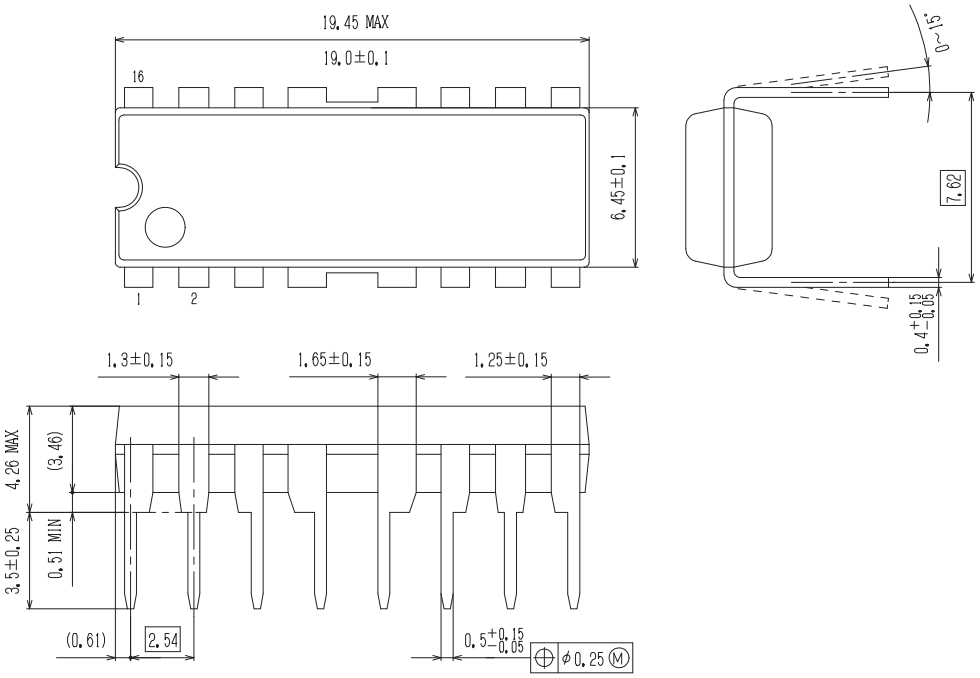
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output saturation voltage	$V_O$sat1	V_{IN} = V_{DD}-5.0V, I_O = 0.5A			1.2	V
	$V_O$sat2	V_{IN} = V_{DD}-5.0V, I_O = 1.0A			1.5	V
	$V_O$sat3	V_{IN} = V_{DD}-5.0V, I_O = 1.5A			2.0	V
Output sustain voltage	$V_O$sus	I_O = 100mA	65			V
Input current	I_{IN}	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

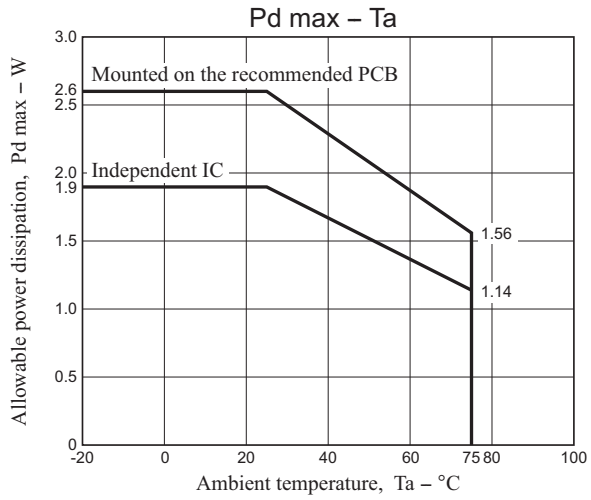
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Package Dimensions

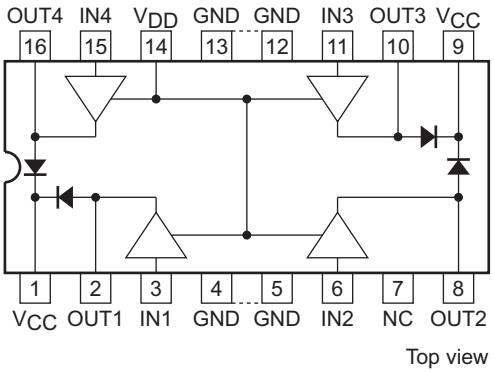
unit : mm

PDIP16 FUSED LEADS / DIP16F (300 mil)
CASE 646AQ
ISSUE O



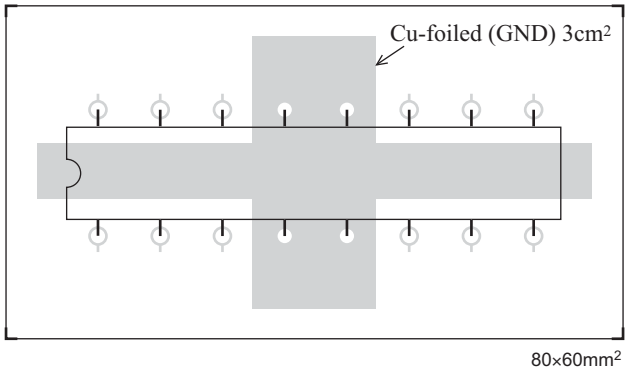


Pin Assignment

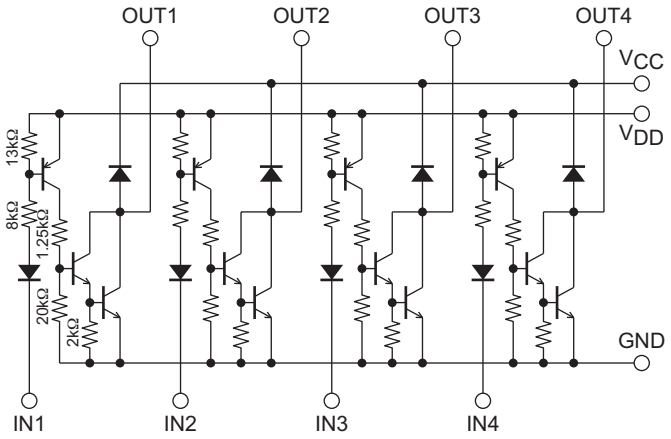


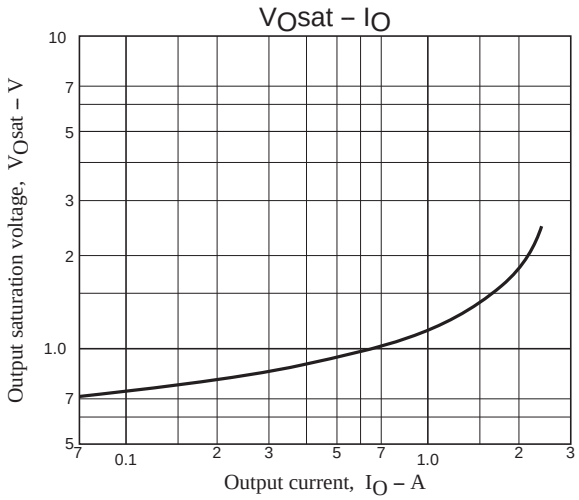
Note: V_{CC} (pins 1 and 9) is shorted internally.

Recommended PCB



Equivalent Circuit





ORDERING INFORMATION

Device	Package	Shipping (Qty / Packing)
LB1205-E	DIP16F(300mil) (Pb-Free / Halogen Free)	25 / Fan-Fold
LB1205-L-E	DIP16F(300mil) (Pb-Free / Halogen Free)	25 / Fan-Fold
LB1205L-E	DIP16F(300mil) (Pb-Free / Halogen Free)	25 / Fan-Fold
LB1205Z-E	DIP16F(300mil) (Pb-Free / Halogen Free)	25 / Fan-Fold