

SANYO

No. 1371C

LB1645N

Bidirectional Motor Driver

The LB1645N is a bidirectional motor driver IC. Since it has a 2-input logic circuit and performs the functions of bidirectional driving and braking, it is capable of direct driving 6V, 9V, 12V motors. The output voltage can be varied by using an external Zener diode.

Features

- . 2-input logic can be used to exercise control of bidirectional driving and braking.
- . On-chip elements to absorb dash current of motor
- . Input connectable direct to MOS LSI
- . Output voltage variable by use of external Zener diode

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

			unit
Maximum Supply Voltage	V_{CCmax}	18	V
Input Voltage	V_{IN}	-0.3 to V_{CC}	V
Output Current	I_{OUT}	± 1.6	A
Allowable Power Dissipation	P_{dmax}	2.2	W
Operating Temperature	T_{opr}	-25 to +75	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

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

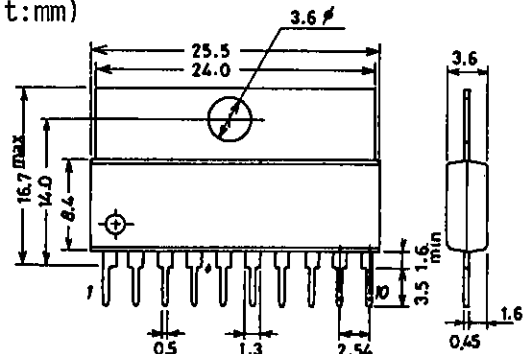
			unit
Supply Voltage	V_{CC1}	7 to 18	V
"	V_{CC2}	5 to 18	V

Electrical Characteristics at $T_a=25^\circ\text{C}, V_{CC}=12\text{V}$, See Test Circuit.

			min	typ	max	unit
Input Threshold Voltage	V_{th}	$R_L=\infty$	1.1	1.3	1.5	V
Minimum Input ON Current	I_{IN}	$R_L=\infty$		10	15	μA
Output Voltage	V_o	$R_L=60\text{ohms}, V_Z=7.4\text{V}$	6.6	7.2	7.4	V
Output Leakage Current	I_{OL}	Pins 5, 6 GND, $R_L=\infty$		0.01	1.0	mA
Current Dissipation	I_{CC}	" "	3	6	-10	mA
Saturation Voltage(Upper)	V_{sat1}	$V_{CC}=12\text{V}, I_{OUT}=300\text{mA}$		1.9	2.2	V
	V_{sat1}'	$V_{CC}=12\text{V}, I_{OUT}=500\text{mA}$		1.9	2.3	V
Saturation Voltage(Lower)	V_{sat2}	$V_{CC}=12\text{V}, I_{OUT}=300\text{mA}$	0.25	0.5		V
	V_{sat2}'	$V_{CC}=12\text{V}, I_{OUT}=500\text{mA}$	0.4	0.65		V

Package Dimensions 3046B

(unit:mm)



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Truth Table

Input		Output		Function
IN1	IN2	OUT1	OUT2	
0	0	0	0	Braking
1	0	1	0	Forward (reverse) drive
0	1	0	1	Reverse (forward) drive
1	1	0	0	Braking

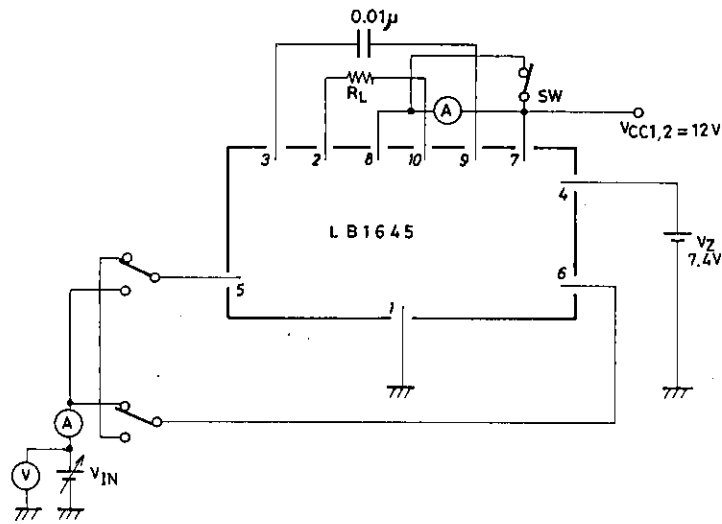
Input level
 1 : 2.0V or more
 0 : 0.7V or less

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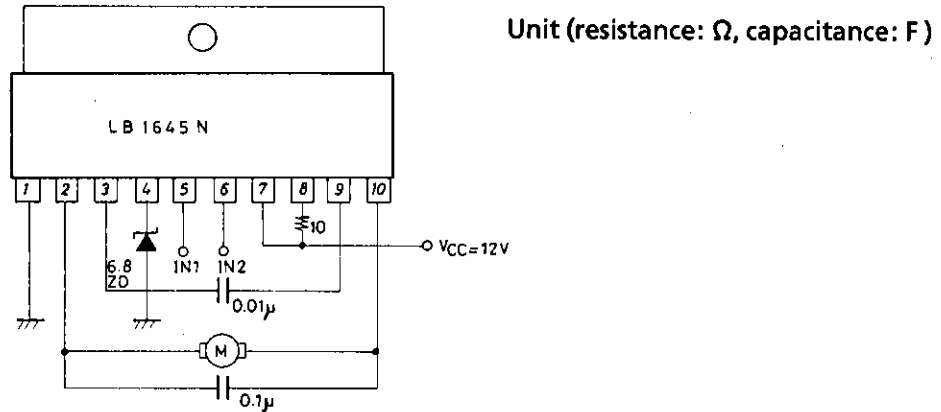
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LB1645N

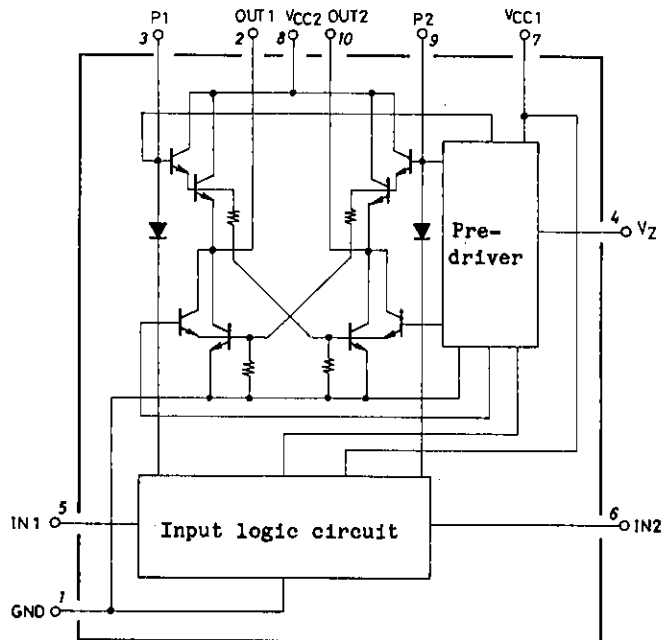
Test Circuit

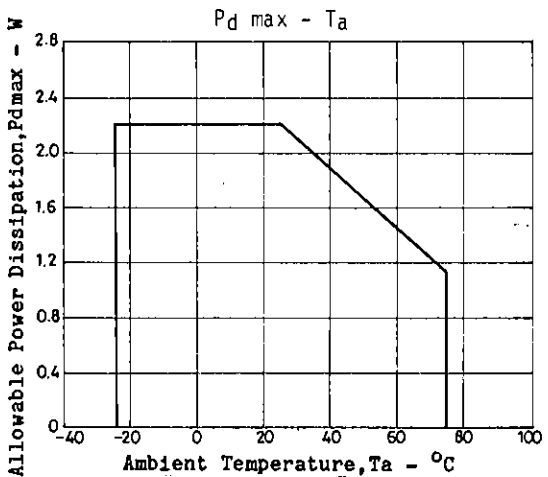
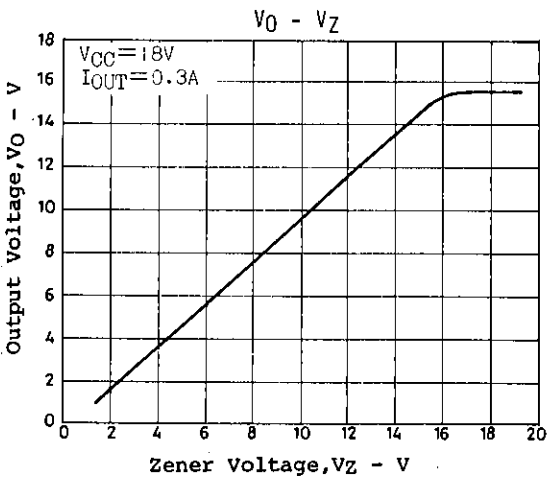
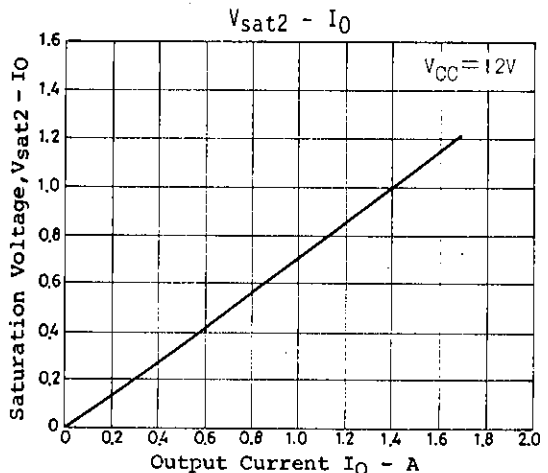
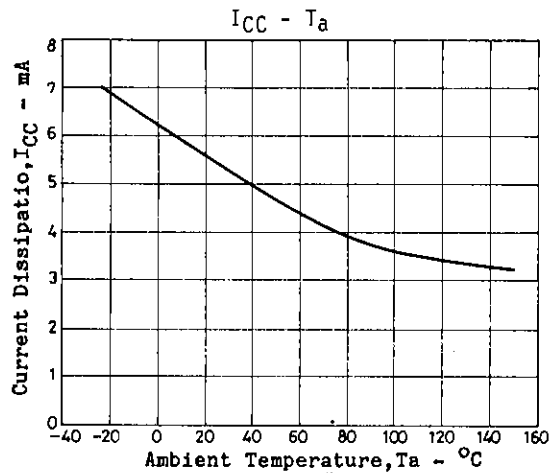
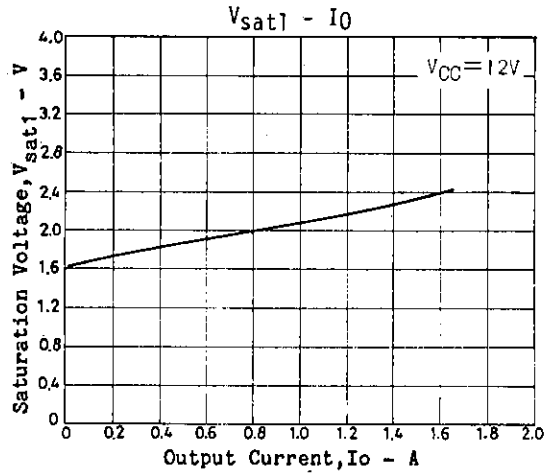
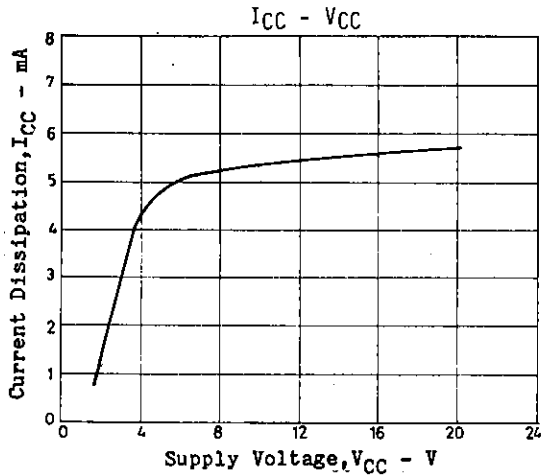


Sample Application Circuit : 6V motor



Equivalent Circuit Block Diagram





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