

SANYO**LB1642****Bidirectional Motor Driver with Braking Function****Overview**

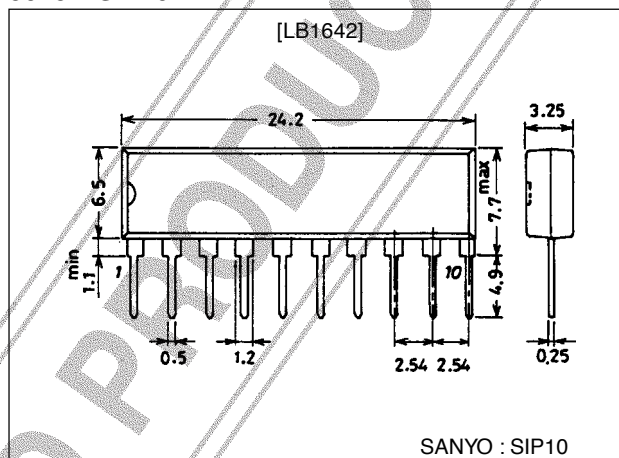
The LB1642 is a bidirectional motor driver IC. It is especially suited for use in motor drive applications where the arm control function of players and the auto reverse function of cassette decks are performed.

Features

- On-chip braking function.
- On-chip diode to absorb dash current.
- Wide operating voltage range (4 to 16V).
- Direct drivable with TTL.

Package Dimensions

unit:mm

3043A-SIP10**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\max}$		18	V
Input voltage	V_{IN}		-0.3 to V_{CC}	V
Output current	$I_O\max$	$t=5\text{ms}$, Cycle=0.2Hz or less	0.7	A
Allowable power dissipation	$P_d\max$		1.0	W
Operating temperature	T_{opr}		-25 to +75	°C
Storage temperature	T_{stg}		-55 to +125	°C

Allowable Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V_{CC}		4 to 16	V
High-level input voltage	V_{IH}		2 to V_{CC}	V
Low-level input voltage	V_{IL}		-0.3 to +0.4	V
Output current	I_O		-100 to +100	mA
Forward reverse inhibit time	t_{OFF}		10 or more	μs

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LB1642

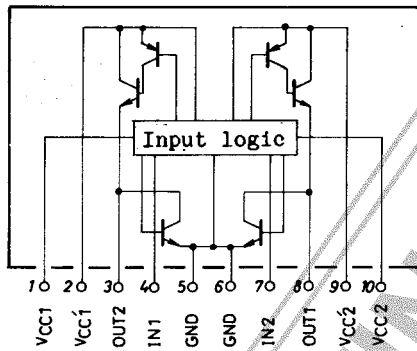
Electrical Characteristics at Ta = 25°C, VCC=VCC'=12V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
High-level output voltage 1	V _{OH1}	V _{I1} or V _{I2} =2V, I _O =-50mA	11.0			V
High-level output voltage 2	V _{OH2}	V _{I1} or V _{I2} =2V, I _O =-100mA	10.9			V
Low-level output voltage 1	V _{OL1}	V _{I1} or V _{I2} =2V, I _O =50mA			0.3	V
Low-level output voltage 2	V _{OL2}	V _{I1} or V _{I2} =2V, I _O =100mA			0.35	V
Interoutput voltage	V _{O1} -V _{O2}	V _{I1} or V _{I2} =2V, I _O =±100mA	10.6			V
Input current	I _I	V _I =2V	70		200	μA
Output leakage current	I _{O leak}	V _{CC} =V _{CC'} =18V, V _O =0V, V _{IN1} =V _{IN2} =0V, V _O =18V			±100	μA
Current drain	I _{CC}	V _{IN1} =2V or V _{IN2} =2V, V _{CC} =V _{CC'} =16V			30	mA
		V _{IN1} =V _{IN2} =2V, V _{CC} =V _{CC'} =16V			60	mA

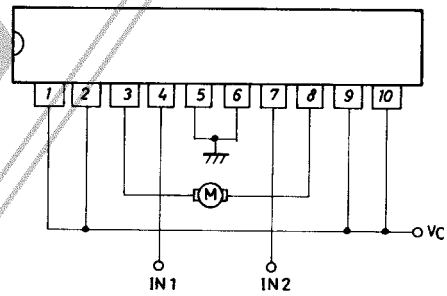
Control Mode

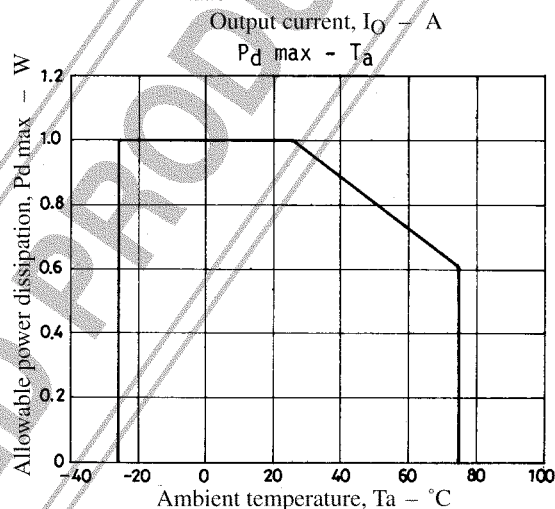
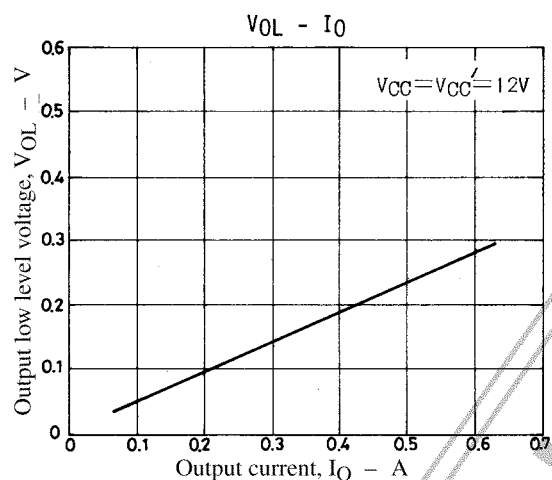
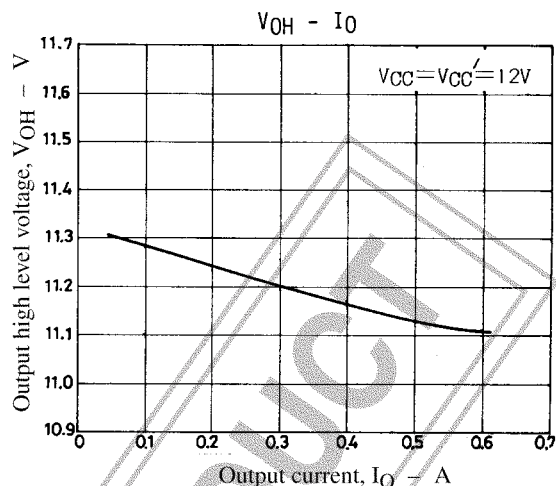
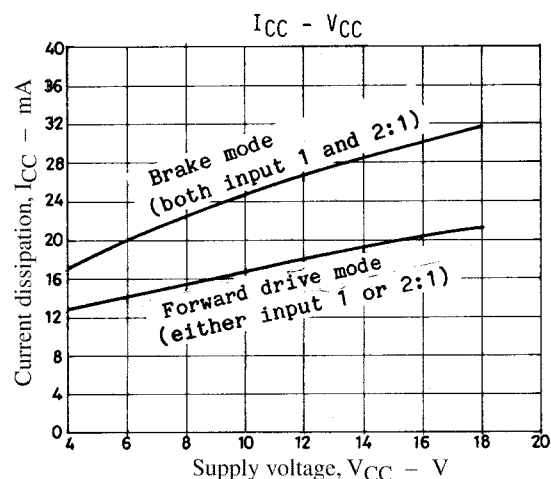
Input		Output		Remarks
1	2	1	2	
0	0	-	-	Open
1	0	1	0	Forward drive
0	1	0	1	Reverse drive
1	1	0	0	Braking

Equivalent Circuit Block Diagram



Sample Application Circuit





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