

SANYO

No.2011A

**LB1642B**

Monolithic Digital IC
 BIDIRECTIONAL MOTOR DRIVER
 WITH BRAKING FUNCTION

The LB1642B is a bidirectional motor driver IC. It is especially suited for use in motor drive applications where the arm control function of a player or the auto reverse function of a cassette deck is performed.

Features

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

Absolute Maximum Ratings at Ta=25°C

				unit
Maximum Supply Voltage	V_{CCmax}		18	V
Input Voltage	V_{IN}	-0.3 to V_{CC}		V
Output Current	I_{Omax}	t=5ms, cycle time=5s or more	0.7	A
		t=2ms, cycle time=0.2s or more	1.0	A
Allowable Power Dissipation	P_{dmax}		1.3	W
Operating Temperature	T_{opg}	-25 to +75		°C
Storage Temperature	T_{stg}	-55 to +125		°C

Allowable Operating Conditions at Ta=25°C

				unit
Supply Voltage	V_{CC}	4 to 16		V
"H"-Level Input Voltage	V_{IH}	2 to V_{CC}		V
"L"-Level Input Voltage	V_{IL}	-0.3 to +0.4		V
Output Current	I_O	-300 to +300		mA
Forward Reverse Inhibit Time	T_{OFF}	10 or more		us

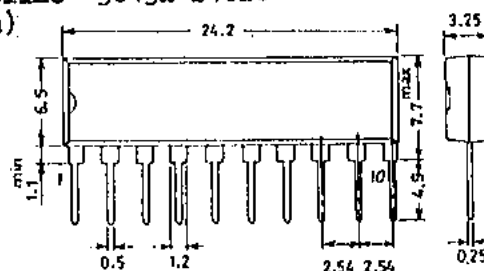
Electrical Characteristics at Ta=25°C, $V_{CC}=V_{CC}'=12V$

			min	typ	max	unit
"H"-Level Output Voltage	V_{OH1}	V_{I1} or $V_{I2}=2V, I_O=-50mA$	11.0			V
"H"-Level Output Voltage	V_{OH2}	V_{I1} or $V_{I2}=2V, I_O=-300mA$	10.9			V
"L"-Level Output Voltage	V_{OL1}	V_{I1} or $V_{I2}=2V, I_O=50mA$			0.3	V
"L"-Level Output Voltage	V_{OL2}	V_{I1} or $V_{I2}=2V, I_O=300mA$			0.35	V
Interoutput Voltage	$V_{O1}-V_{O2}$	V_{I1} or $V_{I2}=2V, I_O=\pm 300mA$	10.6			V
Input Current	I_I	$V_I=2V$	70		200	uA
Output Leakage Current	I_{OLeak}	$V_{CC}=V_{CC}'=18V, V_{IN1}=V_{IN2}=0V, V_O=18V$ or 0V			±100	uA

Continued on next page.

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

Case Outline 3043A-S10IC
(unit:mm)

SANYO: SEP10

Specifications and information herein are subject to change without notice.

SANYO Electric Co., Ltd. Semiconductor Overseas Marketing Div.
 15-13, 6 chome, Sotokanda, Chiyoda-ku, TOKYO 101 JAPAN

8070TS/9087KI/N115MW, TS No.2011-1/2

LB1642B

Continued from preceding page.

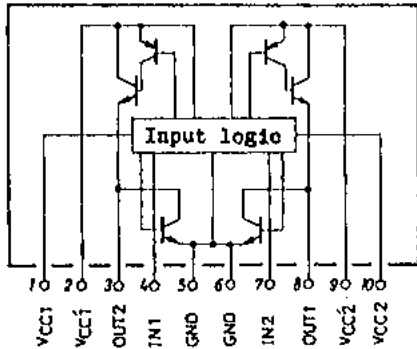
Current Dissipation

I_{CC}

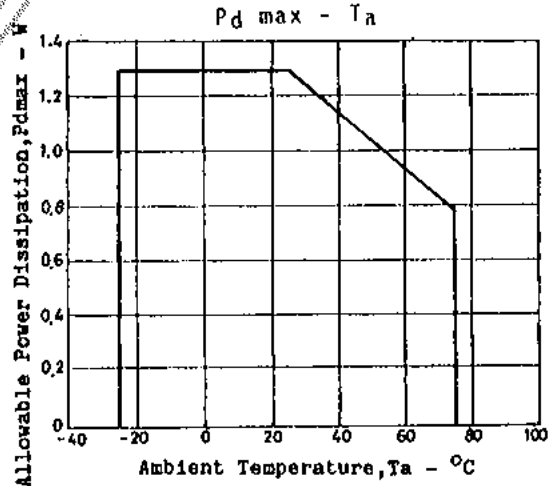
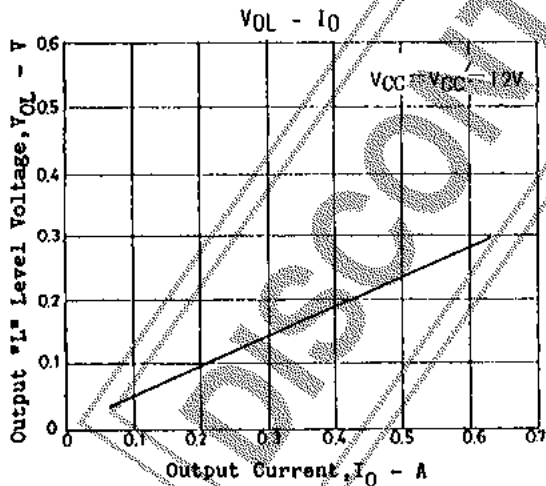
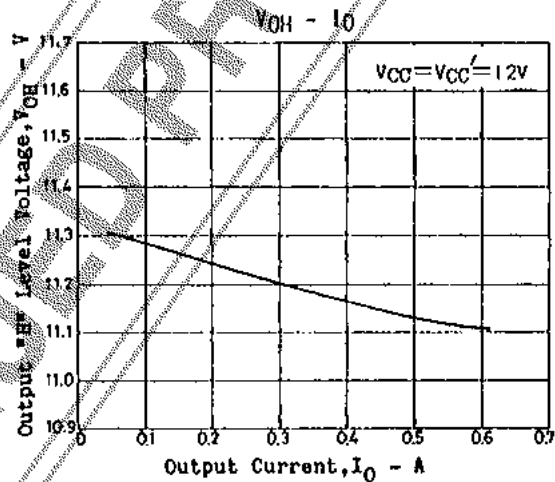
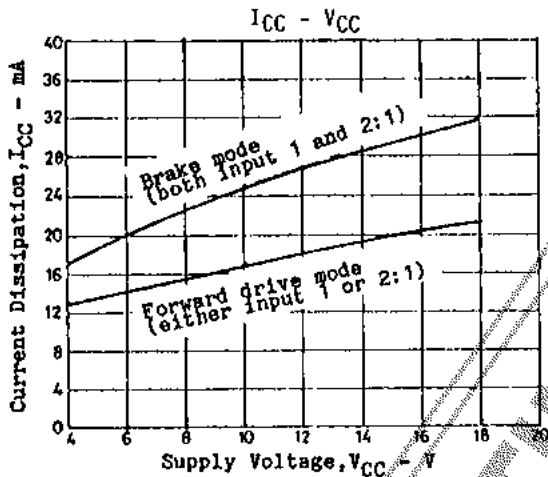
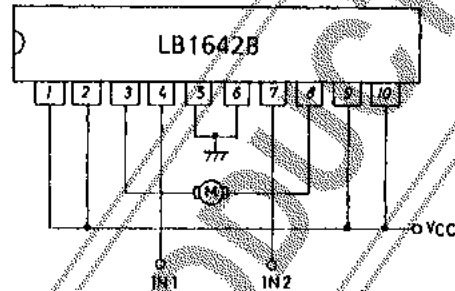
$V_{IN1}=2V$ or $V_{IN2}=2V$,
 $V_{CC}=V_{CC}'=16V$
 $V_{IN1}=V_{IN2}=2V, V_{CC}=V_{CC}'=16V$

min	typ	max	unit
		30	mA
		60	mA

Equivalent Circuit Block Diagram



Sample Application Circuit



Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.