

**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 <sub>CC</sub> max		18	V
Input Voltage	V <sub>IN</sub>	-0.3 to V <sub>CC</sub>		V
Output Current	I <sub>O</sub> max	t=5ms, cycle time=5s or more	0.7	A
		t=2ms, cycle time=0.2s or more	1.0	A
Allowable Power Dissipation	Pdmax		1.3	W
Operating Temperature	Topg	-25 to +75		°C
Storage Temperature	Tstg	-55 to +125		°C

Allowable Operating Conditions at Ta=25°C				unit
Supply Voltage	V <sub>CC</sub>	4 to 16		V
"H"-Level Input Voltage	V <sub>IH</sub>	2 to V <sub>CC</sub>		V
"L"-Level Input Voltage	V <sub>IL</sub>	-0.3 to +0.4		V
Output Current	I <sub>O</sub>	-300 to +300		mA
Forward Reverse Inhibit Time	T <sub>OFF</sub>	10 or more		us

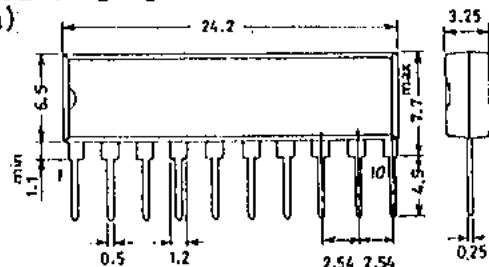
Electrical Characteristics at Ta=25°C, V <sub>CC</sub> =V <sub>CC</sub> '=12V		min	typ	max	unit
"H"-Level Output Voltage	V <sub>OH1</sub> V <sub>I1</sub> or V <sub>I2</sub> =2V, I <sub>O</sub> =-50mA	11.0			V
"H"-Level Output Voltage	V <sub>OH2</sub> V <sub>I1</sub> or V <sub>I2</sub> =2V, I <sub>O</sub> =-300mA	10.9			V
"L"-Level Output Voltage	V <sub>OL1</sub> V <sub>I1</sub> or V <sub>I2</sub> =2V, I <sub>O</sub> =50mA			0.3	V
"L"-Level Output Voltage	V <sub>OL2</sub> V <sub>I1</sub> or V <sub>I2</sub> =2V, I <sub>O</sub> =300mA			0.35	V
Interoutput Voltage	V <sub>O1</sub> -V <sub>O2</sub> V <sub>I1</sub> or V <sub>I2</sub> =2V, I <sub>O</sub> =±300mA	10.6			V
Input Current	I <sub>I</sub> V <sub>I</sub> =2V		70		uA
Output Leakage Current	I <sub>O</sub> Leak V <sub>CC</sub> =V <sub>CC</sub> '=18V, V <sub>IN1</sub> =V <sub>IN2</sub> =0V, V <sub>O</sub> =18V or 0V			±100	uA

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**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.

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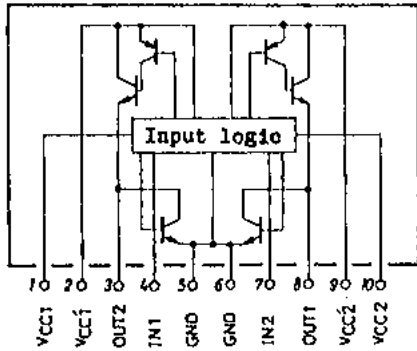
Current Dissipation

$I_{CC}$

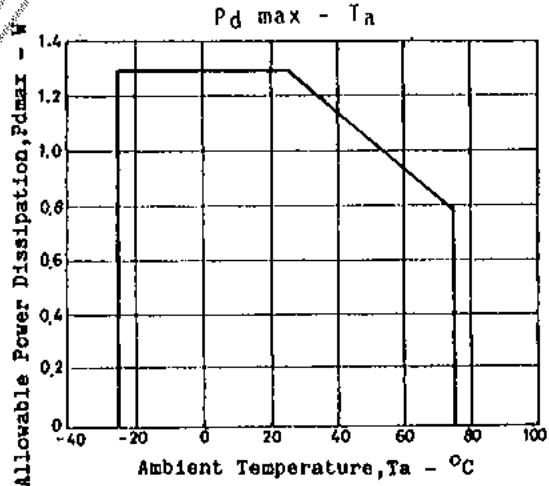
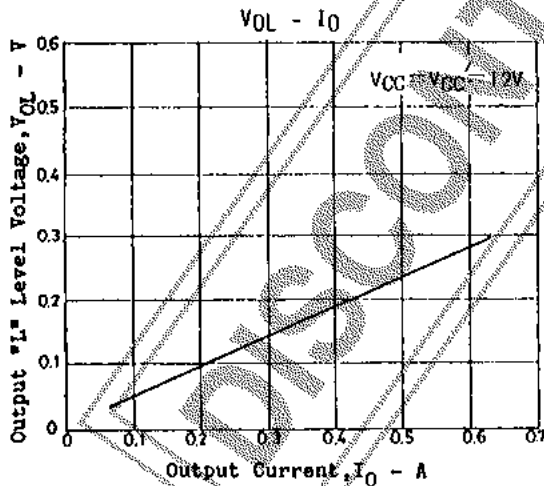
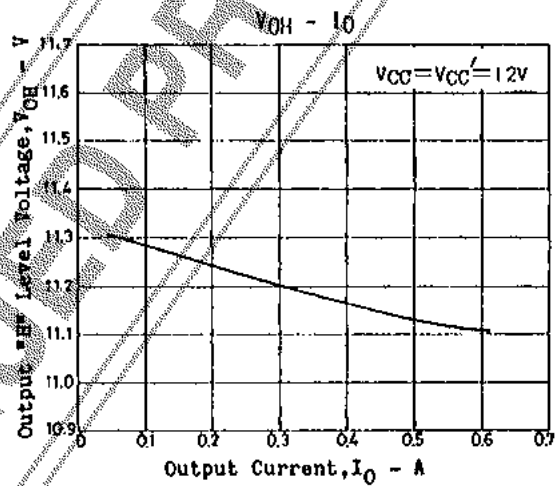
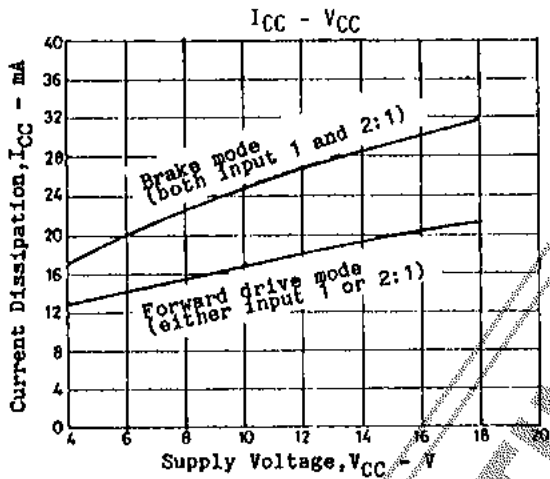
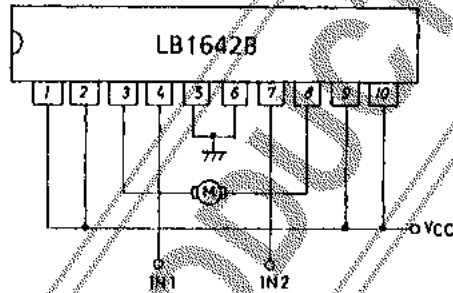
$V_{IN1}=2V$  or  $V_{IN2}=2V$ ,  
 $V_{CC}=V_{CC}'=16V$   
 $V_{IN1}=V_{IN2}=2V, V_{CC}=V_{CC}'=16V$

	min	typ	max	unit
$I_{CC}$			30	mA
$I_{CC}$			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.