

<b>SANYO</b>	No. 1358D	<b>LB1642</b> Bidirectional Motor Driver with Braking Function
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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

**Absolute Maximum Ratings at Ta=25°C**

			unit
Maximum Supply Voltage	V <sub>CCmax</sub>	18	V
Input Voltage	V <sub>IN</sub>	-0.3 to V <sub>CC</sub>	V
Output Current	I <sub>Omax</sub> t=5ms, Cycle=0.2Hz or less	0.7	A
Allowable Power Dissipation	P <sub>dmax</sub>	1.0	W
Operating Temperature	T <sub>opr</sub>	-25 to +75	°C
Storage Temperature	T <sub>stg</sub>	-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>	-100 to +100	mA
Forward Reverse Inhibit Time	T <sub>OFF</sub>	10 or more	µs

**Electrical Characteristics at Ta=25°C, V<sub>CC</sub>=V<sub>CC'</sub>=12V**

			min	typ	max	unit
"H"-Level Output Voltage	1 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	2 V <sub>OH2</sub> V <sub>I1</sub> or V <sub>I2</sub> =2V, I <sub>O</sub> =-100mA		10.9			V
"L"-Level Output Voltage	1 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	2 V <sub>OL2</sub> V <sub>I1</sub> or V <sub>I2</sub> =2V, I <sub>O</sub> =100mA				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> =±100mA		10.6			V
Input Current	I <sub>I</sub> V <sub>I</sub> =2V		70		200	µA
Output Leakage Current	I <sub>OLeak</sub> V <sub>CC</sub> =V <sub>CC'</sub> =18V, V <sub>O</sub> =0V, V <sub>IN1</sub> =V <sub>IN2</sub> =0V, V <sub>O</sub> =18V				±100	µA

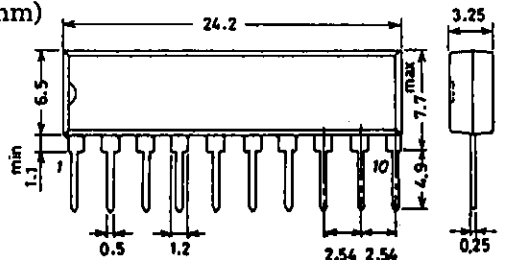
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**Control Mode**

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

**Package Dimensions 3043A**

(unit: mm)

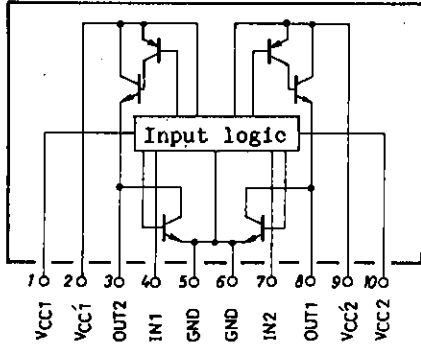


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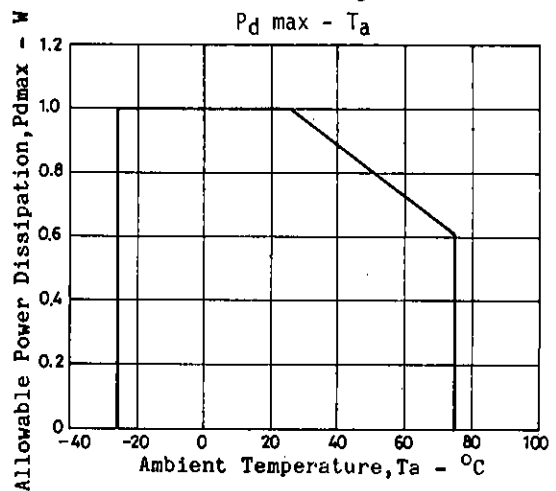
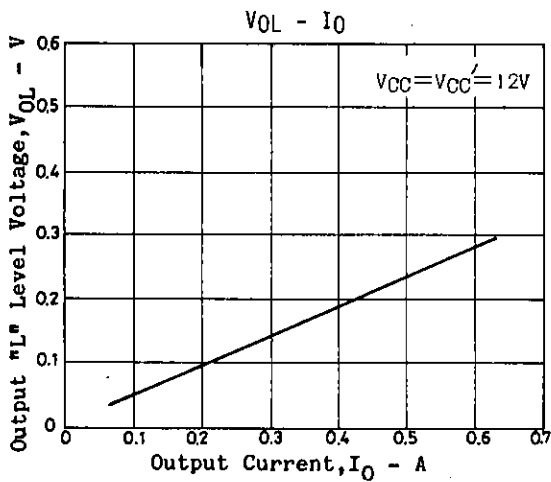
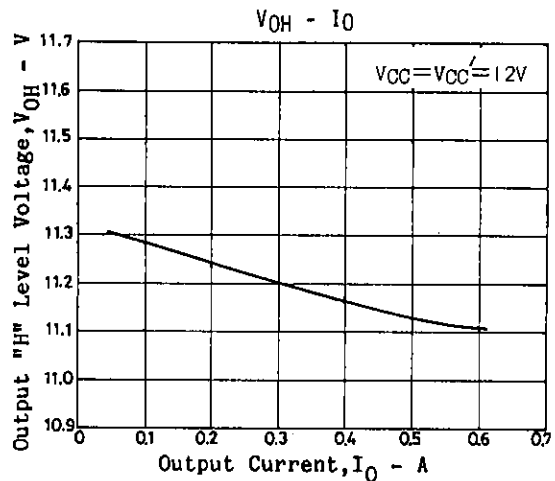
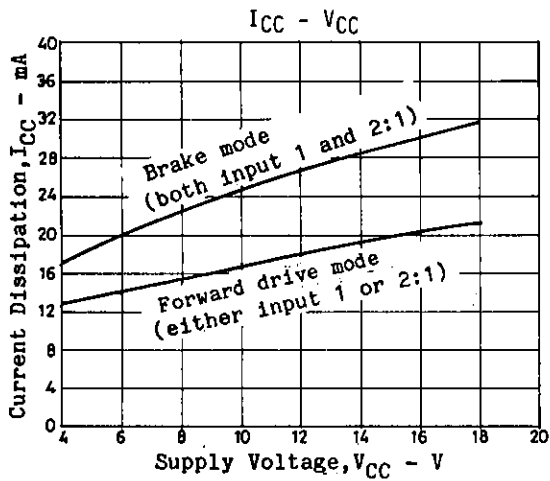
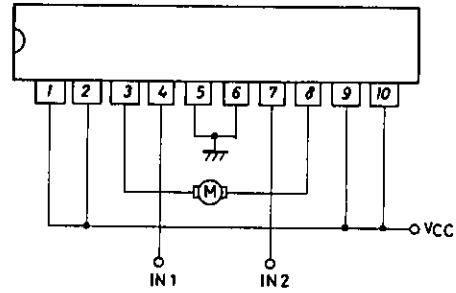
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Current Dissipation	$I_{CC}$	$V_{IN1}=2V$ or $V_{IN2}=2V,$ $V_{CC}=V_{CC}'=16V$	min	typ	max	unit
"	"	$V_{IN1}=V_{IN2}=2V, V_{CC}=V_{CC}'=16V$			30	mA
					60	mA

Equivalent Circuit Block Diagram



Sample Application Circuit



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