

SANYO

No. 1358D

LB1642**Bidirectional Motor Driver with
Braking Function**

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_{CCmax}	18	V
Input Voltage	V_{IH}	-0.3 to V_{CC}	V
Output Current	I_{Omax} t=5ms, Cycle=0.2Hz or less	0.7	A
Allowable Power Dissipation	P_{dmax}	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

			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	-100 to +100	mA
Forward Reverse Inhibit Time	T_{OFF}	10 or more	µs

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

			min	typ	max	unit
"H"-Level Output Voltage	1 V_{OH1}	V_{I1} or $V_{I2}=2V, I_O=-50mA$	11.0			V
"H"-Level Output Voltage	2 V_{OH2}	V_{I1} or $V_{I2}=2V, I_O=-100mA$	10.9			V
"L"-Level Output Voltage	1 V_{OL1}	V_{I1} or $V_{I2}=2V, I_O=50mA$			0.3	V
"L"-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 $V_{I2}=2V, I_O=\pm 100mA$	10.6			V
Input Current	I_I	$V_I=2V$	70		200	µA
Output Leakage Current	I_{OLeak}	$V_{CC}=V_{CC}'=18V, V_O=0V, V_{IN1}=V_{IN2}=0V, V_O=18V$			±100	µA

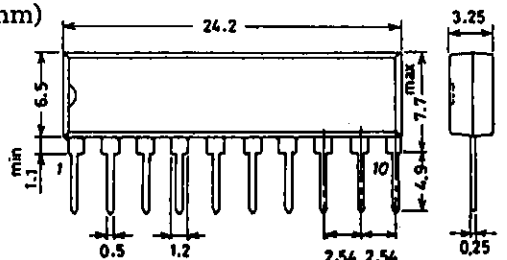
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Control Mode

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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SANYO Electric Co., Ltd. Semiconductor Business Headquarters

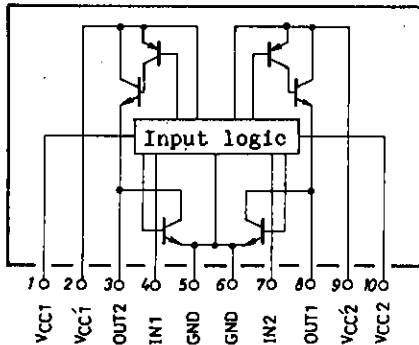
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N3093TS/9087KI/D163/N173KI, TS No.1358-1/3

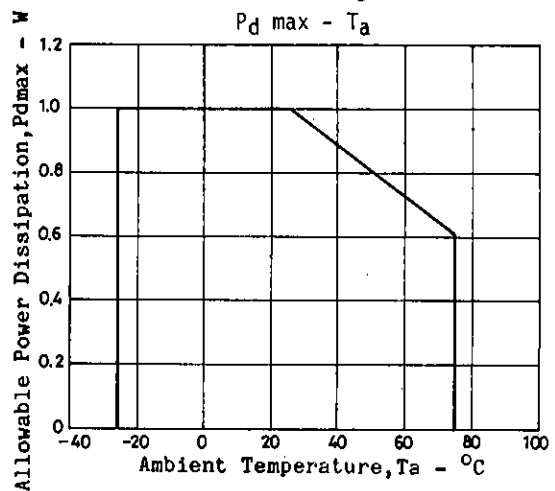
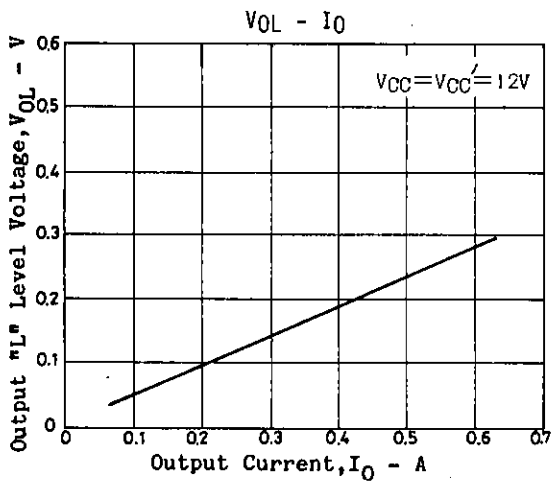
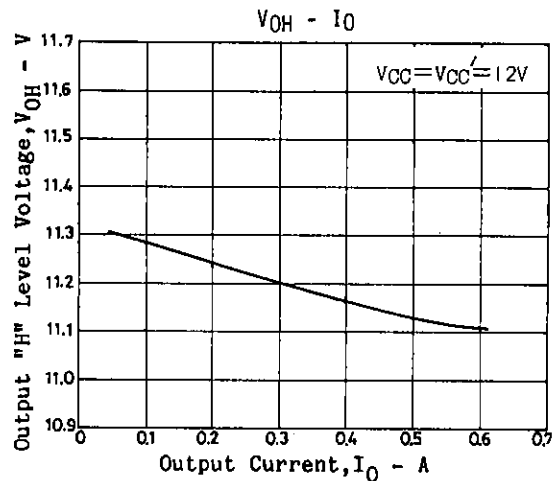
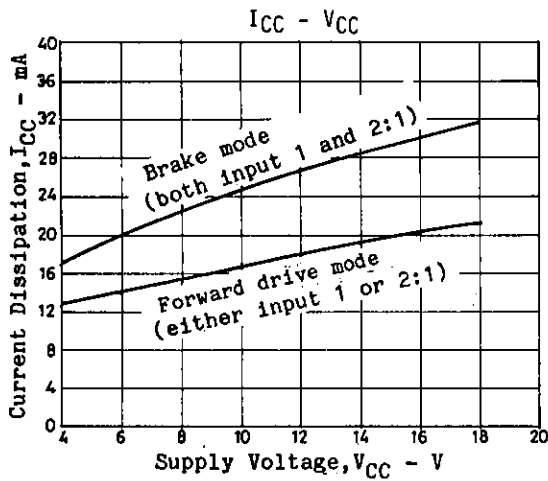
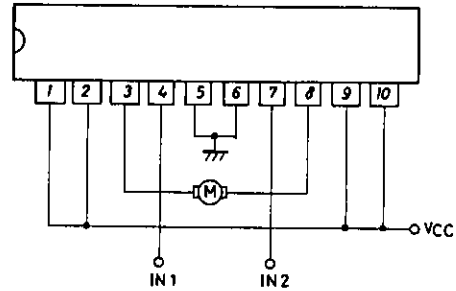
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			min	typ	max	unit
Current Dissipation	I_{CC}	$V_{IN1}=2V$ or $V_{IN2}=2V$, $V_{CC}=V_{CC}'=16V$			30	mA
"	"	$V_{IN1}=V_{IN2}=2V, V_{CC}=V_{CC}'=16V$			60	mA

Equivalent Circuit Block Diagram



Sample Application Circuit



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