

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_{IN}	-0.3 to V_{CC}	V
Output Current	I_{Omax} t=5ms, Cycle=0.2Hz or less	0.7	A
Allowable Power Dissipation	$Pdmax$	1.0	W
Operating Temperature	$Topr$	-25 to +75	°C
Storage Temperature	$Tstg$	-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

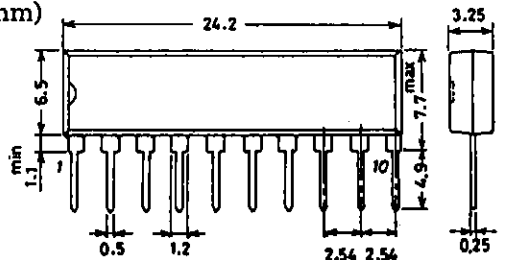
Continued on next page.

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

Package Dimensions 3043A

(unit: mm)

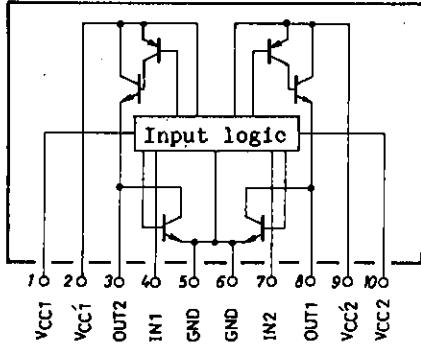


SANYO: SIP10

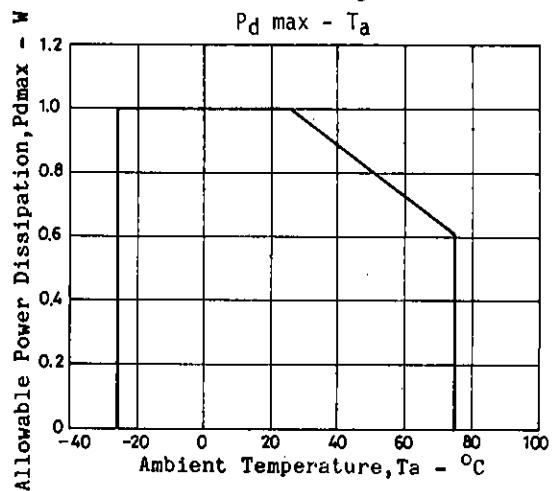
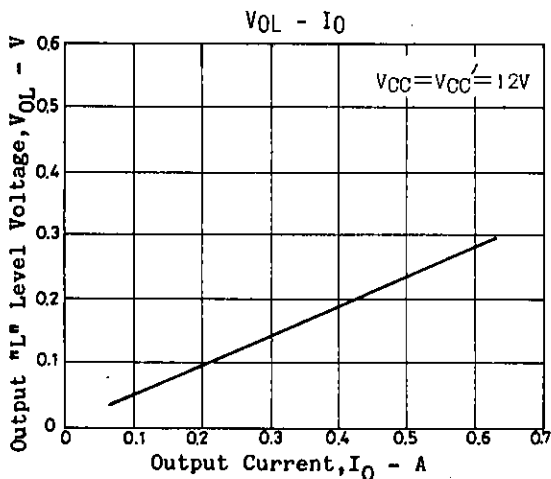
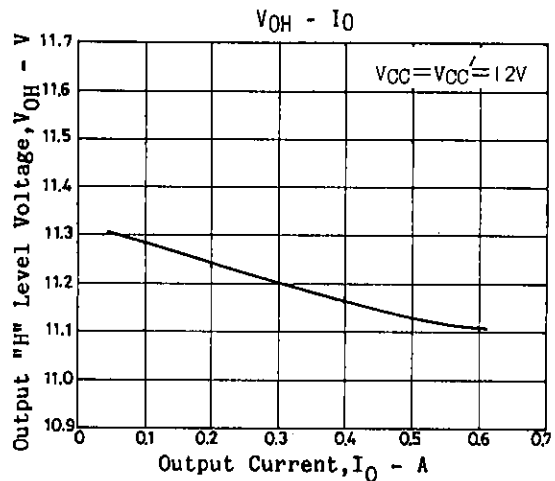
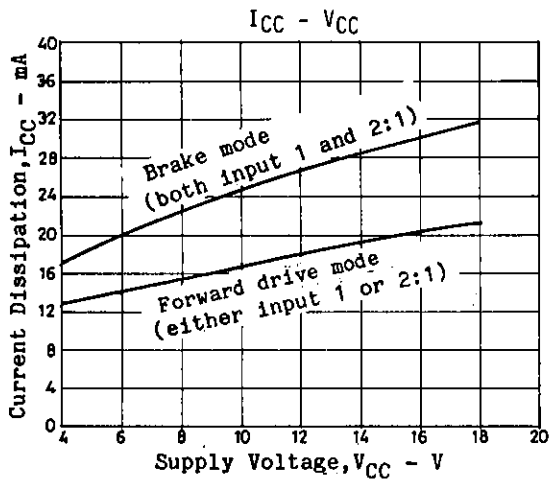
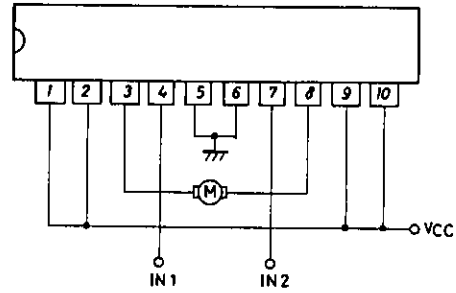
Continued from preceding page.

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



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- 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.