

SANYO	No.2615A	LB1630M
Low-Saturation Bidirectional Motor Driver for Low-Voltage Applications		

The LB1630M is a low-saturation bidirectional motor driver IC for use in low-voltage applications. It is especially suited for use in small-sized low-voltage motors for printers, cassette tape recorders, and commercial equipment.

Features

- . Low-voltage (2.5V min) operation, low current dissipation ($I_{CC} \leq 30\mu A$) at the standby mode
- . Low-saturation voltage (upper transistor + lower transistor residual voltage 1.2V max at 400mA)
- . On-chip spark killer diodes

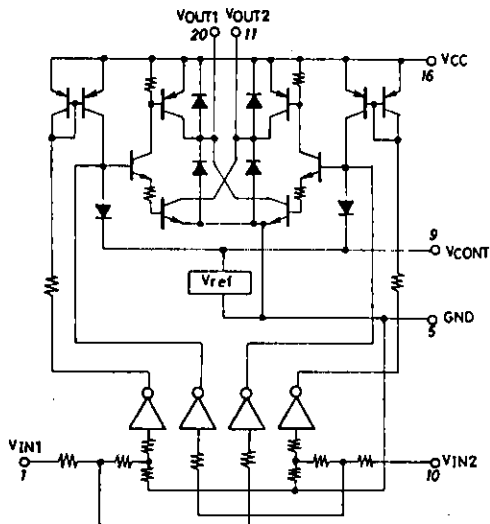
Absolute Maximum Ratings at Ta=25°C

			unit
Maximum Supply Voltage	V_{CC} max	-0.3 to +7.0	V
Output Supply Voltage	V_{OUT}	-0.3 to $V_{CC}+V_F$	V
Input Supply Voltage	V_{IN}	-0.3 to +7.0	V
Allowable Load Resistance	R_M min	Pulse width<50ms Duty 10%	3 ohm
GND Pin Flow-out Current	I_{GND}	Pulse width<50ms Duty 10%	1 A
Allowable Power Dissipation	P_d max	400	mA
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-40 to +125	°C

Allowable Operating Conditions at Ta=25°C

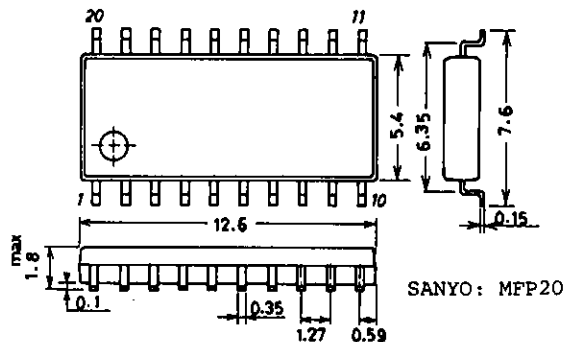
			unit
Supply Voltage	V_{CC}	2.5 to 6.0	V
Input "H"-Level Voltage	V_{IH}	2.0 to 6.0	V
Input "L"-Level Voltage	V_{IL}	-0.3 to +0.7	V

Equivalent Circuit



Package Dimensions 3036B

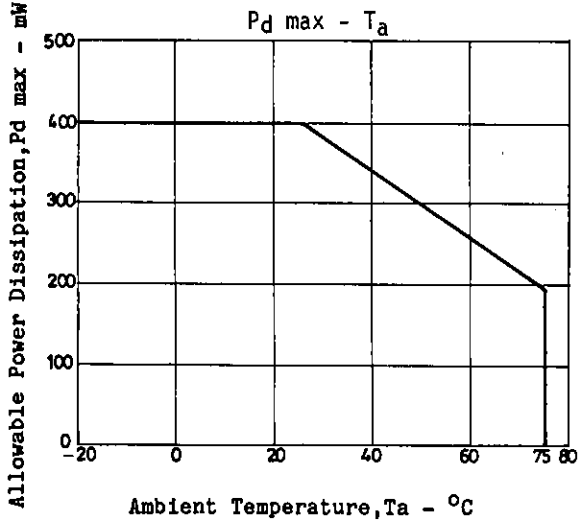
unit : mm



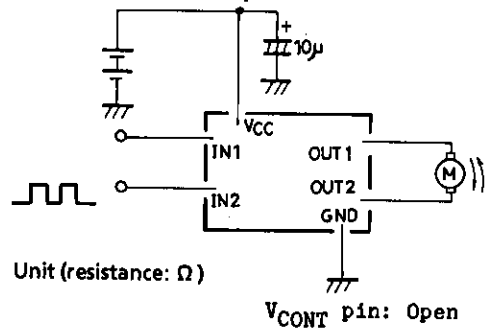
LB1630M

Electrical Characteristics at Ta=25°C

		min	typ	max	unit
Output Saturation Voltage (upper side + lower side)	V _{OUT(1)} V _{OUT(2)}	V _{CC} =3V, V _{IN} =3V, I _{OUT} =200mA		0.6	V
Output Sustain Voltage	V _{o(sus)}	V _{CC} =3.5V, V _{IN} =3V, I _{OUT} =400mA	9	1.2	V
Output Leakage Current	I _{o(leak)}	I _{OUT} =400mA			V
Input Current	I _{IN}	V _{CC} =6V		30	μA
Spark Killer Diode		V _{IN} =6V		1.0	mA
Reverse Current	I _{S(leak)}	V _{CC} =6V, V _{IN} =0V		30	μA
Forward Current	V _{SF}	I _{OUT} =500mA		1.7	V
Current Dissipation	I _{CC}	V _{CC} =3.5V, V _{IN} =3V, I _{OUT} =400mA		430	mA



Sample Application Circuit



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