Ordering number: EN2616A

Monolithic Digital IC

SANYO No.2616A

LB1636M

Low-Saturation Bidirectional Motor Driver for Low-Voltage Applications

The LB1636M 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 ($I_{CC} \leqq 30uA$) at the standby mode
- Low-saturation voltage (upper transistor + lower transistor residual voltage 1.2V max at 400mA)
- On-chip spark killer diodes

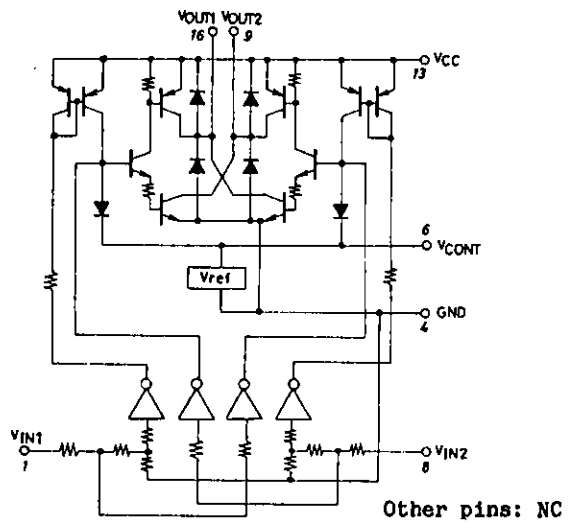
Absolute Maximum Ratings at Ta=25°C

				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	Pd max		380	mA
Operating Temperature	Topr		-20 to +75	°C
Storage Temperature	Tstg		-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

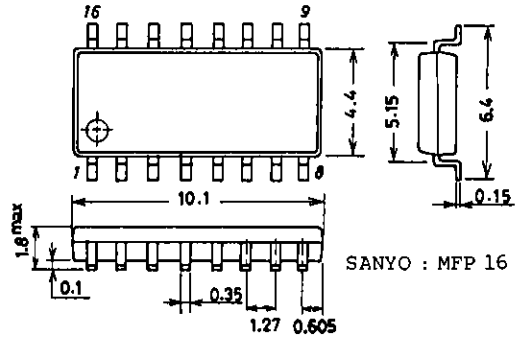
Equivalent Circuit



Other pins: NC

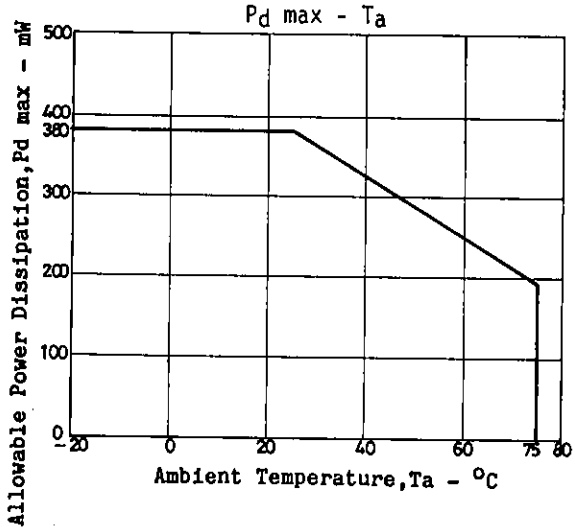
Package Dimensions 3035A

unit: mm

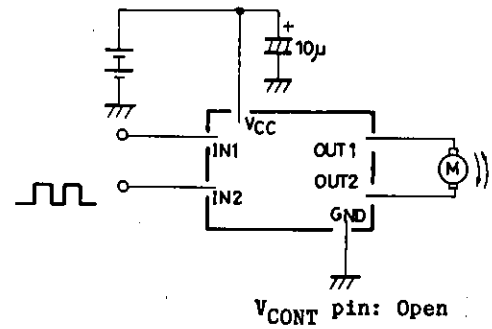


SANYO : MFP 16

Electrical Characteristics at Ta=25°C			min	typ	max	unit
Output Saturation Voltage	$V_{OUT(1)}$	V_{CC}=3V,V_{IN}=3V,I_{OUT}=200mA			0.6	V
(upper side + lower side)	$V_{OUT(2)}$	V_{CC}=3.5V,V_{IN}=3V,I_{OUT}=400mA			1.2	V
Output Sustain Voltage	$V_{o(sus)}$	I_{OUT}=400mA	9			V
Output Leakage Current	$I_{O(leak)}$	V_{CC}=6V			30	μA
Input Current	I_{IN}	V_{IN}=6V			1.0	mA
Spark Killer Diode						
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



V_{CONT} pin: Open