

LB1609

T-52-13-25



3006B

Monolithic Digital IC

Compact DC Motor Driver

©2599A

Use

- Control of rotational speed of tachometer generator-provided compact DC motor used in cassette tape recorder, tape recorder, FDD, etc.

Features

- Applicable to various motors from small motors to large motors by selecting an external PNP transistor
- The motor control pin can be used to turn OFF an external PNP transistor (stop mode).
- Also applicable to hall motors

Absolute Maximum Ratings at $T_a=25^{\circ}\text{C}$

			unit
Maximum Supply Voltage	V_{CC} max	-0.3 to +17	V
Maximum Output Current	I_{OUT}	-30	mA
Allowable Power Dissipation	P_d max	600	mW
Operating Temperature	T_{opg}	-10 to +60	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-30 to +125	$^{\circ}\text{C}$

Allowable Operating Conditions at $T_a=25^{\circ}\text{C}$

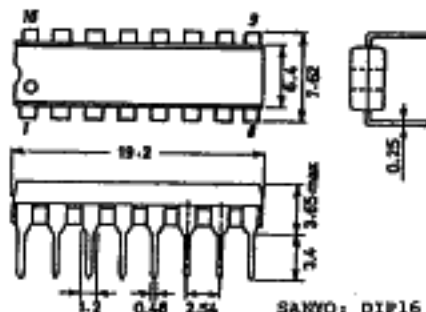
			unit
Supply Voltage	V_{CC}	8 to 16	V
FG Input Voltage	V_{IFG}	3	Vp-p

Electrical Characteristics at $T_a=25^{\circ}\text{C}, V_{CC}=12\text{V}$

			min	typ	max	unit
Current Dissipation	I_{CC}			8.5	15	mA
Vref Output Voltage	V_{ref}	$I_{ref}=0$	4.5	5.0	5.5	V
Vref Output Voltage Load Regulation	ΔV_{ref}	$I_{ref}=0$ to 12mA	-0.2	-0.05		V
Preamp Input Pin Bias Current	I_B	Pin 16 GND	-0.05	-0.02		uA
Preamp Offset Voltage	V_{OFF}	Measured in closed-loop mode		± 2		mV
Schmitt Input Voltage Hysteresis Width	V_{hy}			100	200	mV

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Case Outline 3006B-D16IC (unit:mm)

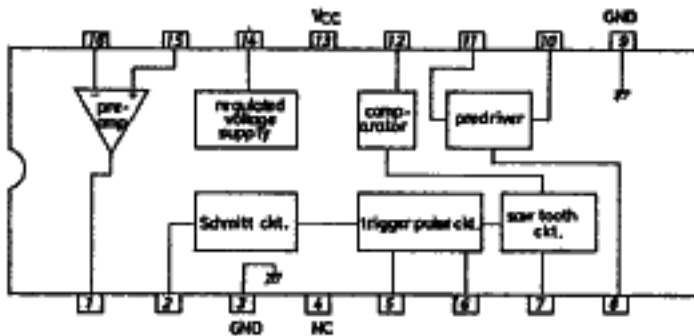


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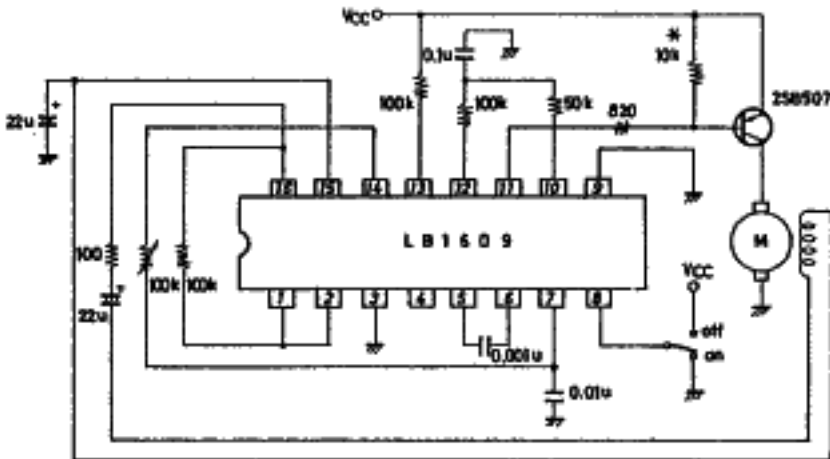
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			min	typ	max	unit
Comparator Output	V _{oom(H)}	Pin 7=2.4V	6.5	7.7		V
H Level Voltage						
Comparator Output	V _{oom(L)}	Pin 7=1.5V		0.2	0.35	V
L Level Voltage						
Predriver	V _{IN(ON)}	I _{IN} =10uA		1.5		V
Input ON-State Voltage						
Predriver	V _{OUT(sat)}	I _{OUT} =-20mA, V _{IN} =0V		0.9	2.0	V
Output Saturation Voltage						
Predriver	I _{OUT(OL)}	V _{OUT} =17V, V _{IN} =2.2V			2.0	uA
Output Leakage Current						
Predriver	h _{FE}	I _{OUT} =-20mA	15000			-
DC Current Gain						
STOP Pin Input	V _{STOP(th)}			1.5		V
Threshold Voltage						

Equivalent Circuit Block Diagram



Sample Application Circuit I



*: Must be adjusted.

