

SANYO

No.863E

LB8050

Intermittent Windshield Wiper Controller

Applications

Intermittent window wiper, seat belt warning lamp, ajar door warning lamp, timer, Schmitt circuit

Features

Performs all functions required for intermittent wipers.

- Any intermittent time settable
- Delayed wipe coupled with washer operation
- 1 to 2 wipes immediately after turning on intermittent switch
- Relay direct driving capability (500mA peak)
- Wide operating voltage range : 8.0 to 16.0V

Absolute Maximum Ratings at Ta = 25°C

			unit
Maximum Supply Voltage	V _{CC} max	16	V
Maximum Output Voltage	V _{OUT} max	18	V
Maximum Output Current	I _O max1	Output : Darlington connection	See Fig.A.
	I _O max2	Output : Not Darlington connection	See Fig.B.
Output Surge Current	I _O surge	Pulse width : 5msec. or less, repeat cycle : 1sec. or more, V _{CC} = 8 to 16V, Ta = -30 to +80°C	1000 mA
Allowable Power Dissipation	Pd max	See Fig.C.	690 mW
Storage Temperature	T _{opr}	-50 to +125	°C
Operating Temperature	T _{opg}	-30 to +80	°C

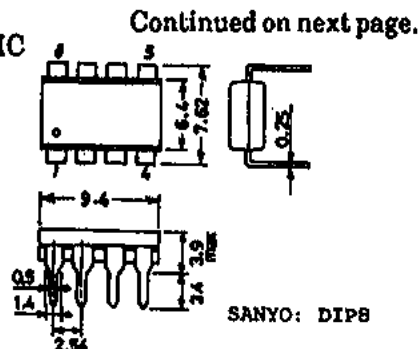
Allowable Operating Range at Ta = 25°C

			unit
Operating Voltage Range	V _{CC}	12 ± 4	V

Electrical Characteristics at Ta = 25°C, V_{CC} = 16V

			Test			
			Circuit	min	typ	max unit
Output Current	I _{OH1}	V _{IN} = 5V, V _{WA} = 2V, V _{WI} = 0V, V _{OH} = 16V	1			100 μA
	I _{OH2}	V _{IN} = 5V, V _{WA} = 2V, V _{WI} = 0V, V _{OH} = 16V	1			100 μA
Output 'L'-Level	V _{OL1}	V _{CC} = 6.4V, I _{O1} = 0.3A, I _{O2} = 4mA, V _{WA} = 0V, V _{WI} = 0V	2			2.1 V
	V _{OL2}	V _{CC} = 6.4V, I _{O1} = 0.3A, I _{O2} = 4mA, V _{WA} = 0V, V _{WI} = 0V	2			1.6 V

Package Dimensions 3001B-D8IC
(unit: mm)



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			Test Circuit	min	typ	max	unit
Input 'H'-Level	V_{IH1}	$I_{WA}=50\mu A, V_{WI}=0V$	3	4.7		6.8	V
	V_{IH2}	$I_{IN}=-1mA, V_{WA}=V_{WI}=0V$	4	13.2		15.4	V
	V_{IH3}	$I_{IN}=-1mA, V_{WI}=2V, V_{WA}=0V$	5	13.2		15.4	V
	V_{IH4}	$I_{IN}=-1mA, V_{WA}=V_{WI}=2V$	6	6.6		8.6	V
Input Current	I_{IH1}	$V_{IN}=7V, V_{WA}=2V, V_{WI}=0V$	7			20	μA
	I_{IH2}	$V_{CC}=6.4V, V_{IN}=2.2V, V_{WI}=0V$	8			2	μA
	I_{WA}	$V_{WA}=10V$	9	5		10	mA
	I_{WI}	$V_{WI}=10V$	10	5		10	mA
Supply Current	$I_{CC1 ON}$	$V_{WA}=V_{WI}=0V$	11	5		13	mA
	$I_{CC2 OFF}$	$V_{WA}=V_{WI}=2V$	12	4		9	mA
	$I_{CC3 OFF}$	$V_{WA}=2V, V_{WI}=0V$	13	4		8.5	mA

Test Circuits

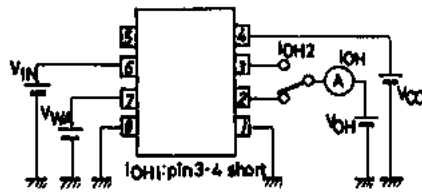
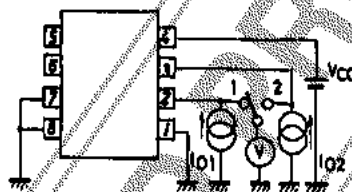
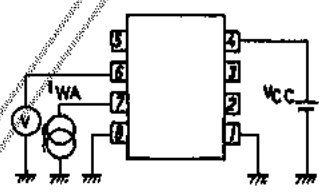
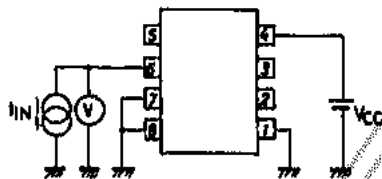
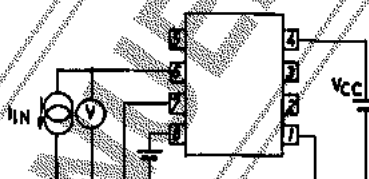
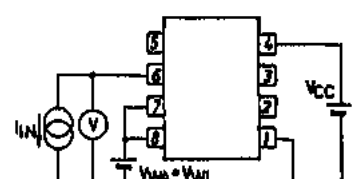
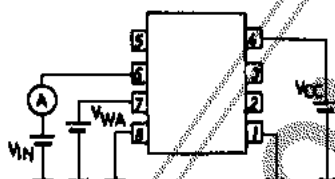
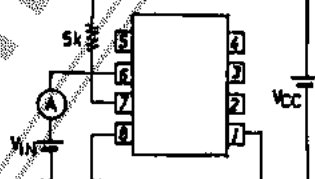
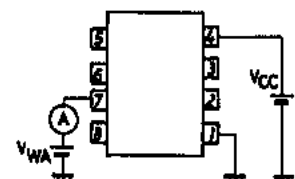
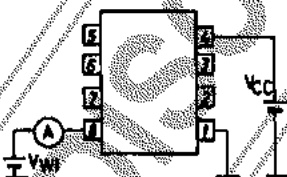
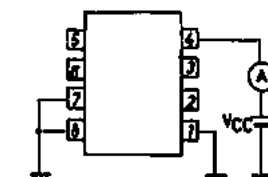
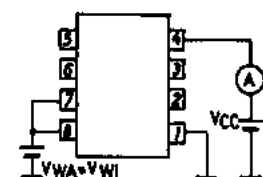
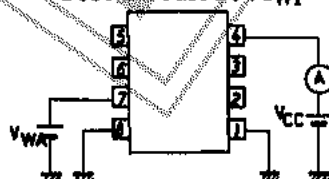
Test Circuit 1 : I_{OH1}, I_{OH2} Test Circuit 2 : $V_{OL1}, V_{OL2}, SW_1, SW_2$ Test Circuit 3 : V_{IH1} Test Circuit 4 : V_{IH2} Test Circuit 5 : V_{IH3} Test Circuit 6 : V_{IH4} Test Circuit 7 : I_{IH1} Test Circuit 8 : I_{IH2} Test Circuit 9 : I_{WA} Test Circuit 10 : I_{WI} Test Circuit 11 : $I_{CC1 ON}$ Test Circuit 12 : $I_{CC2 OFF}$ Test Circuit 13 : $I_{CC3 OFF}$

Fig.A

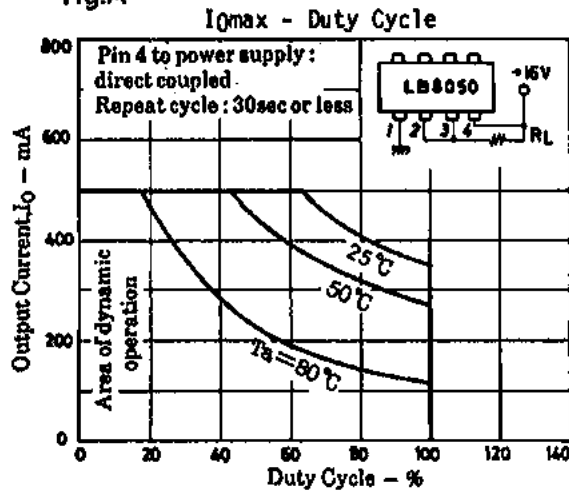


Fig.B

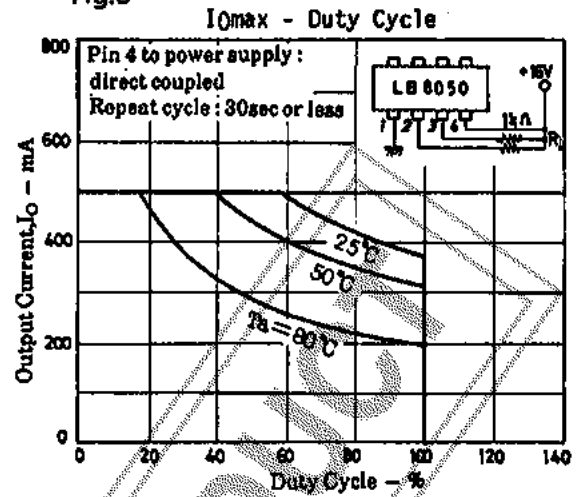
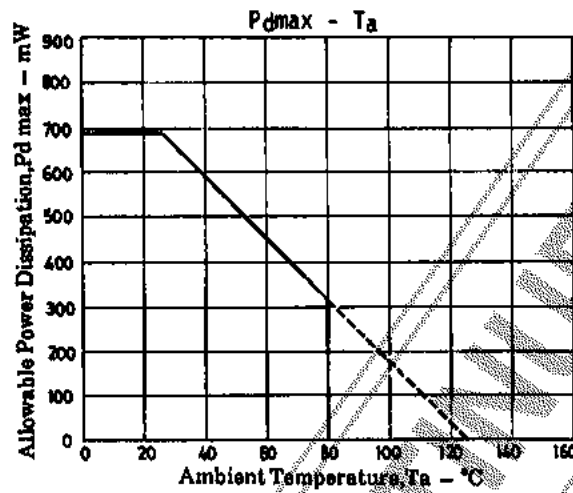
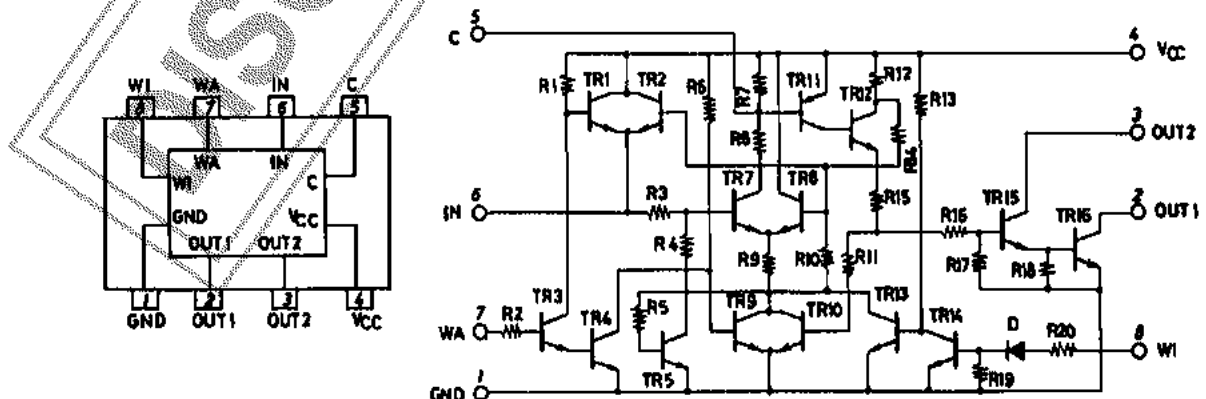


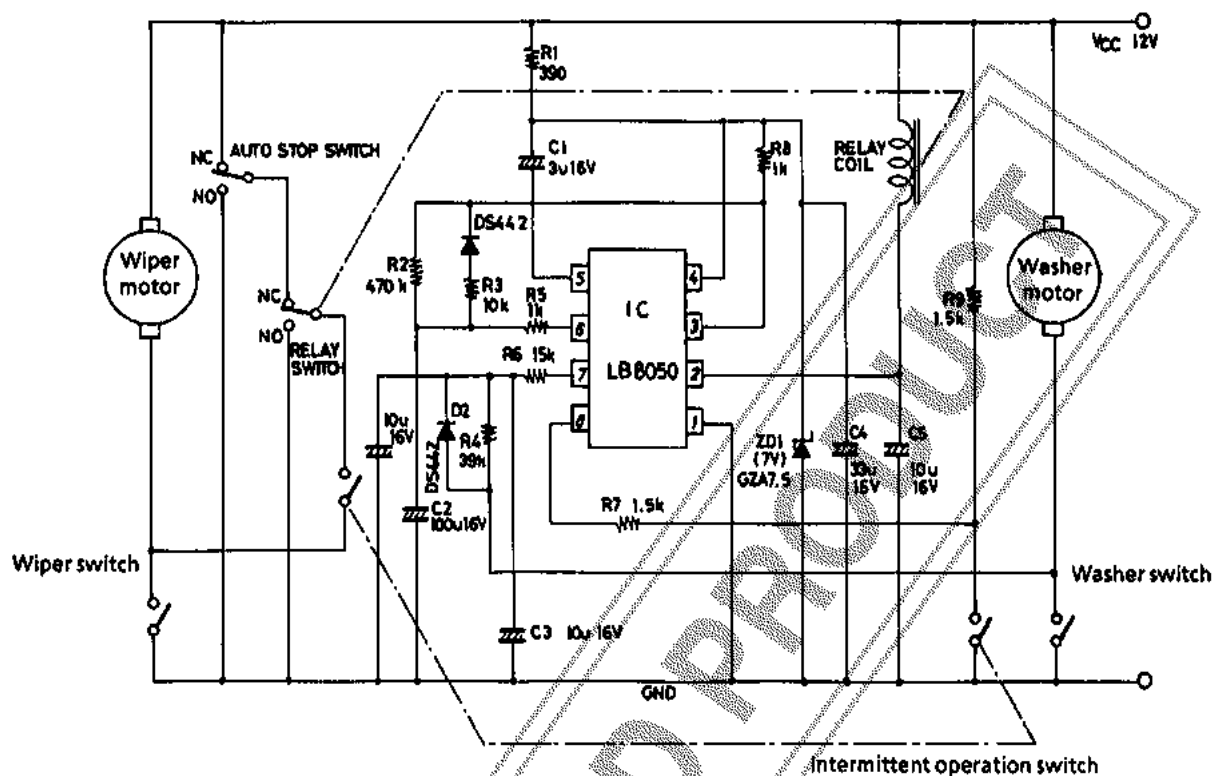
Fig.C



Equivalent Circuit and Block Diagram



Sample Application Circuit : Asynchronous intermittent wiper control



Unit (resistance: Ω , capacitance: F)

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