UMW L9110S

Motor control drive IC

1.Description

UMW L9110S is a two-channel push-pull power amplifier ASIC designed to control the driving motor. It integrates discrete circuits into a single IC, which reduces the number of peripheral devices, reduces the cost and improves the reliability of the whole machine.

UMW L9110S chip has two input control terminals, which can control two output terminals to directly drive the forward and backward rotation of the motor. The chip is widely used in motor drive of toy cars, pulse electromagnetic valve drive, stepping motor drive, switching power tube and other circuits.

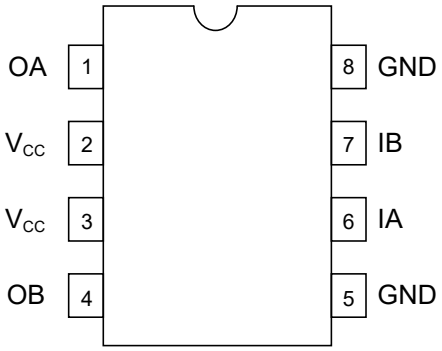
2.Features

- The power supply range is 2.2~6.5V
- Low static operating current
- Lower saturation pressure drop
- V_{CC}=5V, maximum operating current 200mA
- TTL/CMOS output level is compatible and can be directly connected with CPU I/O
- Few external devices
- Package: DIP8, SOP8

3.Product Usage

- Pulse electromagnetic valve drive
- Toy car motor drive
- Stepping motor drive
- Drive switch power transistor

4.Pinning Information



SOP-8

Pin Description

Pin Number	Pin Name	Describe
1	OA	A Output pin
2	V_{CC}	Positive pole of power supply
3	V_{CC}	Positive pole of power supply
4	OB	B Output pin
5	GND	Power ground
6	IA	A Input terminal
7	IB	B Input terminal
8	GND	Power ground

5.Limit Parameter

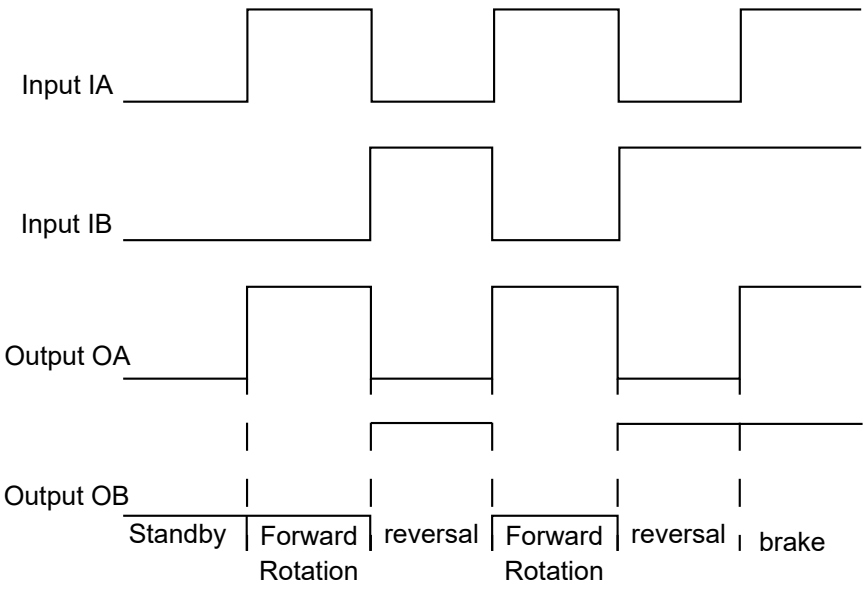
Project	Parameter	Symbol	Rating	Units
Voltage	Power Supply Voltage	V_{CC}	-0.3 to 8	V
	Input Voltage	V_{IN}	-0.3 to V_{CC}	V
Dissipation power	SOP8/DIP8	P_D	500	mW
Temperature	Operating Temperature Range	T_W	-30 to 85	°C
	Storage Temperature Range	T_C	-50 to 125	°C
	Welding Temperature	T_H	260	°C,10s

Note: Limit parameter refers to the limit value that cannot be exceeded under any condition. If this limit value is exceeded, it may cause physical damage such as product deterioration. At the same time, when the parameters are close to the limit, the chip can not be guaranteed to work normally.

6.Electrical characteristics (T_A=25°C, V_{CC}=5V)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Operating Voltage	V_{CC}		2.2	5	6.5	V
Quiescent Current	I_{CC}	Operate without load		0.2	2	μA
Incoming Current	I_{IN}	V_{IN}=V_{DD} or GND		0.1	2	μA
Input Low Voltage	V_{INL}	I_A, I_B	0		0.25V_{CC}	V
Input High Voltage	V_{INH}	I_A, I_B	0.7V_{CC}		V_{CC}	V
Output Saturation Voltage	V_{AB1}	I_{OUT}=100mA		0.19	0.25	V
Output Saturation Voltage	V_{AB2}	I_{OUT}=180mA		0.36	0.45	V

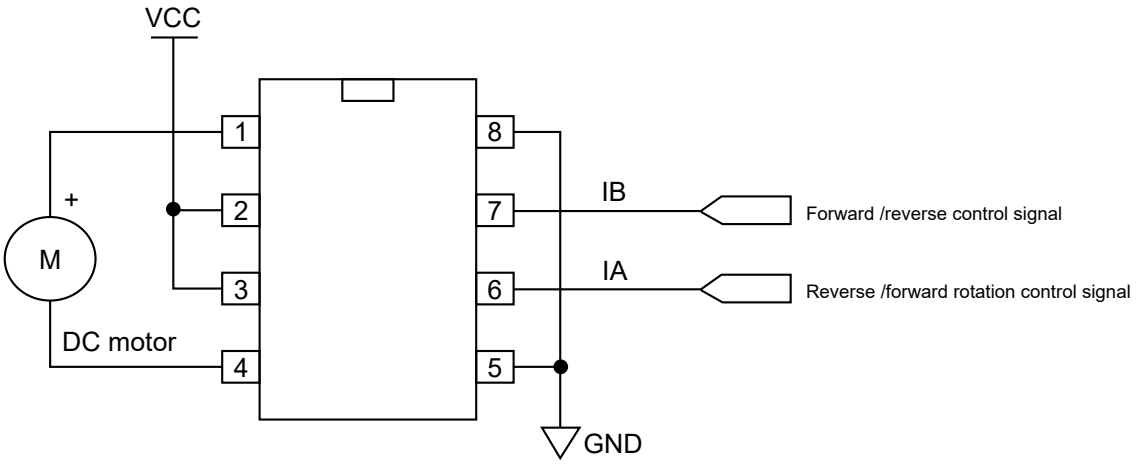
7.Input Waveform Diagram

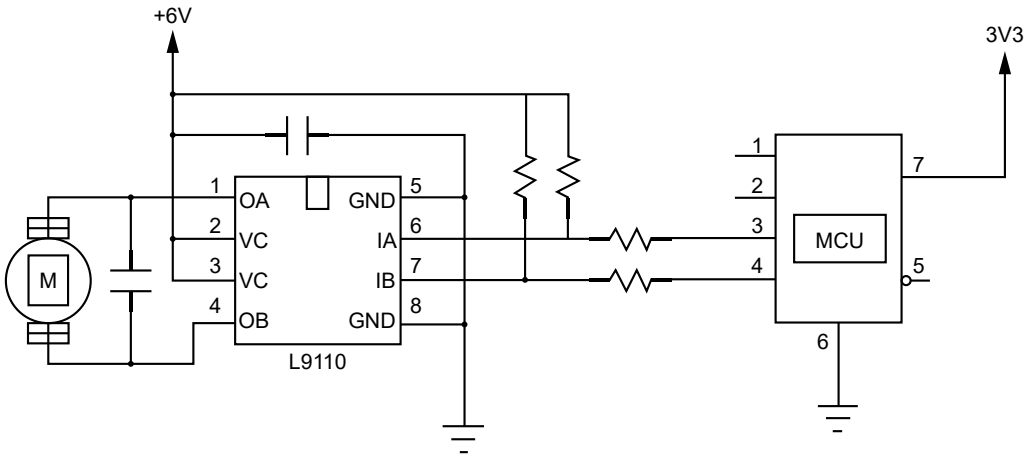


8.Logic Diagram

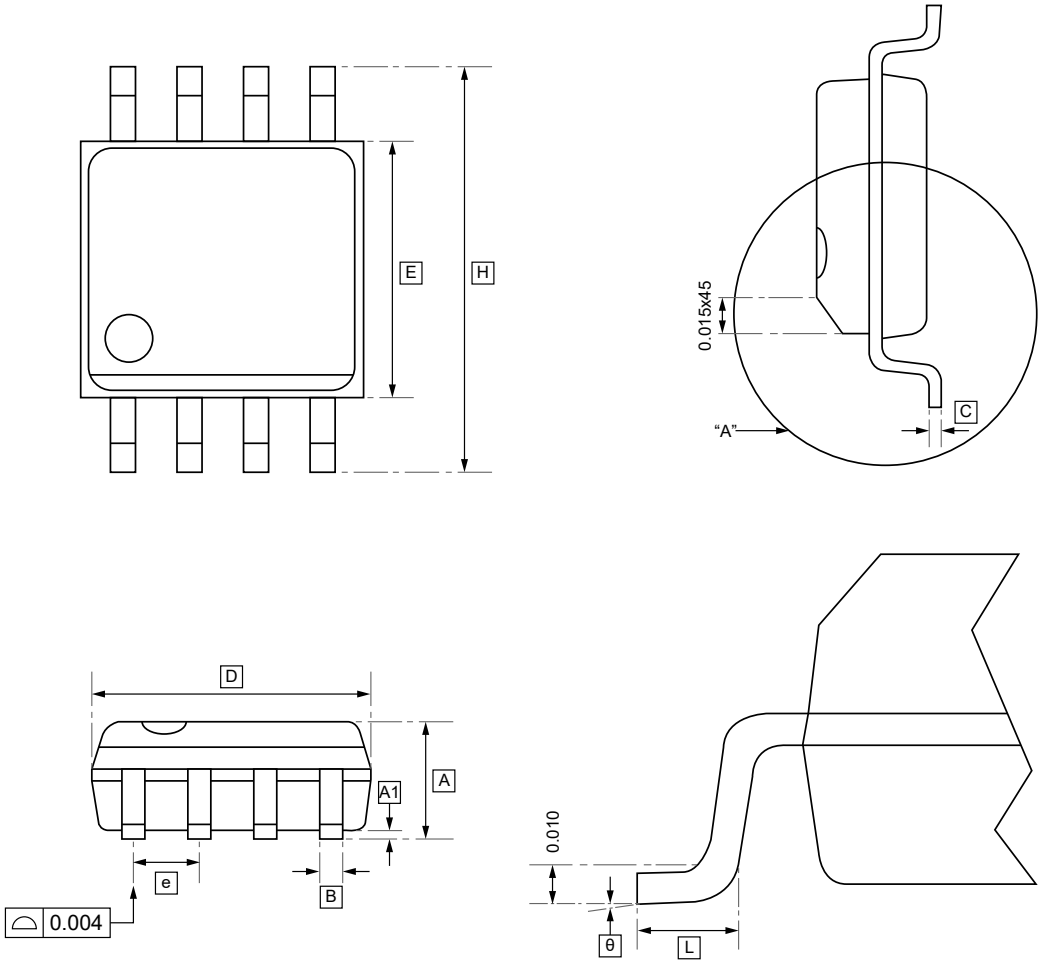
Input		Output		Remarks
IA	IB	OA	OB	
L	L	Z	Z	Standby
L	H	L	H	Forward/Reverse rotation
H	L	H	L	Reverse/Forward rotation
H	H	Z	Z	Brake

9.Typical Application





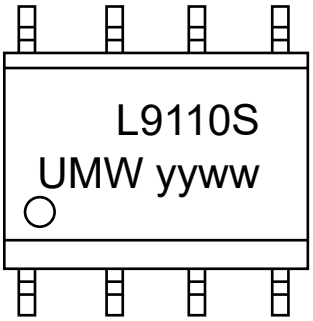
10.SOP-8 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	B	C	D	E	e	H	L	θ
Min	1.473	0.101	0.330	0.190	5.994	3.81	1.27	5.791	0.381	0°
Max	1.727	0.254	0.508	0.249	6.197	3.987		6.197	1.27	8°

11.Ordering Information



yy: Year Code
ww: Week Code

Order Code	Package	Base QTY	Delivery Mode
UMW L9110S	SOP-8	2500	Tape and reel

12.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

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