

## ■Description

The WD6208N is a monolithic integrated circuit used for driving reversible motors. It can control reversible motors in cassette players and other electrical equipment by using TTL-level logic signals.

The IC contains a logic section, which controls forward and reverse rotations as well as forced stop, and an output power section, which can supply an output current of up to 100mA (Typ.) according to the logic control.

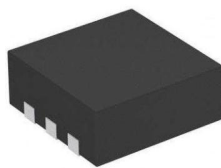
The WD6208N is available in DFN1×1-6 , SOP-8 and SOT23-6 Package.

## ■Features and Benefits

- Built-in Motor Driving Power Transistors (Typ.100mA)
- Brake is Applied When Stopping the Motor(When Input A and B are Both HIGH Level)
- Built-in Diode to Absorb Surge Currents
- Very Low Standby Circuit Current When Input A and B are Both LOW Level
- Wide Range of Operating Supply Voltage (2 to 15.0V)
- Direct Control with the TTL Logic

## ■Applications

- DVD Player
- Bipolar stepper motor
- IR-CUT drive
- range of automotive
- industrial-applications.



DFN1×1-6



SOP-8

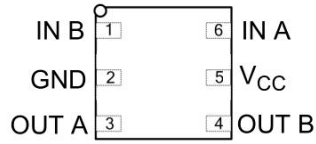


SOT23-6

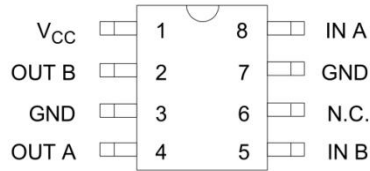
Figure 1. Package Type of WD6208N

## Pin Configuration

DFN1×1-6



SOP8



SOT23-6

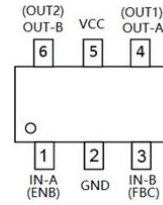


Figure 2. Pin Configuration of WD6208N

## Pin Description

Pin Number			Pin Name	Function
DFN1×1-6	SOP-8	SOT23-6		
1	5	3	IN B	Input B
6	8	1	IN A	Input A
	6		N.C.	Nothing Connect
2	3, 7	2	GND	Ground
5	1	5	VCC	Supply Voltage
4	2	6	OUT B	Output B
3	4	4	OUT A	Output A

## Functional Block Diagram

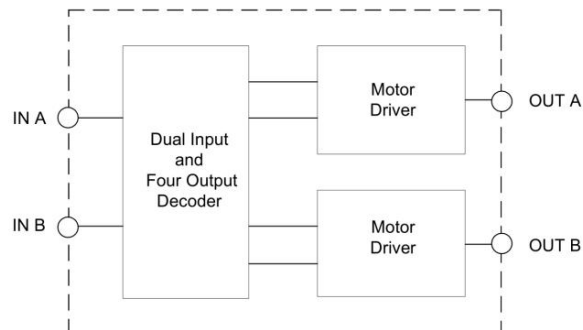
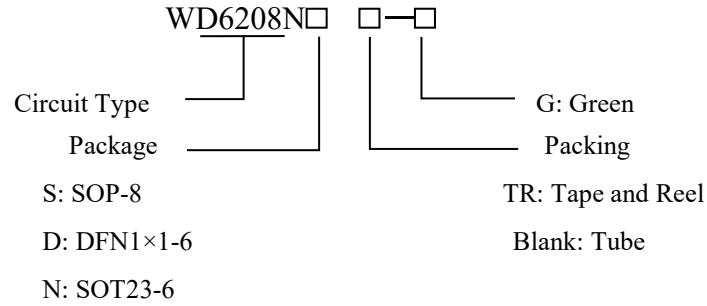


Figure 3. Functional Block Diagram of WD6208N

## Ordering Information



Package	Temperature Range	Part Number	Marking ID	Packing Type
		Green	Green	
SOP-8	0 to 70°C	WD6208NS-G	WD6208N	Tube
		WD6208NSTR-G	WD6208N	Tape/Reel
DFN1×1-6	0 to 70°C	WD6208NDTR-G	D6N	Tape/Reel
SOT23-6	0 to 70°C	WD6208NNTR-G	WD6208N	Tape/Reel

WADE Products with "G" suffix are available in green package. are RoHS compliant.

## Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	18	V
Maximum Motor Current	$I_{OUT}$	500	mA
Power Dissipation	$P_D$	700 (Note 2,3)	mW
Storage Temperature Range	$T_{STG}$	-55 to 150	°C

Note 1: Stresses greater than those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under “Recommended Operating Conditions” is not implied. Exposure to “Absolute Maximum Ratings” for extended periods may affect device reliability.

Note 2: Power dissipation is reduced by 7 mW for each increase in  $T_A$  of 1 °C over 25 °C

Note 3: Only apply for SOP-8 package.

## ■ Recommended Operating Conditions

Parameter	Symbol	Min	Max	Unit
Supply Voltage	$V_{CC}$	2	15	V
Operating Temperature	$T_A$	0	70	°C

## ■ Electrical Characteristics

$V_{CC}=9V$ ,  $T_A=25^{\circ}C$ , unless otherwise specified.

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Output Current	$I_O$		200			mA
Output Saturation Voltage	$V_{CE}$	$I_O=100mA$			1.6	V
Input High Level Voltage	$V_{IH}$		2.0			V
Input Low Level Voltage	$V_{IL}$				0.8	V
Standby Supply Current	$I_{ST}$	When input A and B are both low level			0.4	mA
Input High Level Current	$I_{IH}$	$V_{IH}=4.5V$			400	$\mu A$

Input and Output Truth Table

INA	INB	OUTA	OUTB
H	L	H	L
L	H	L	H
H	H	L	L
L	L	OPEN	OPEN

## ■ Typical Applications Circuit

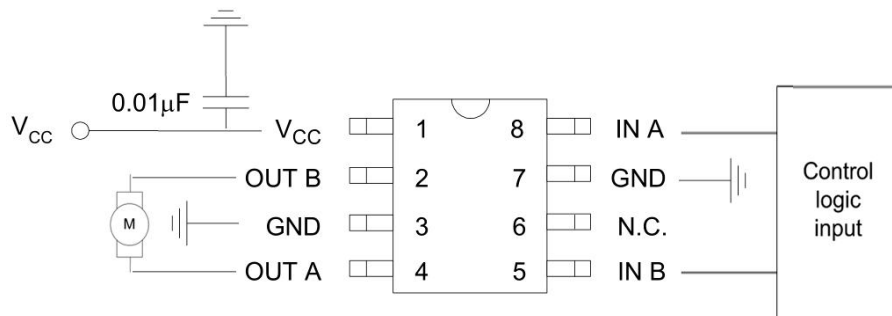
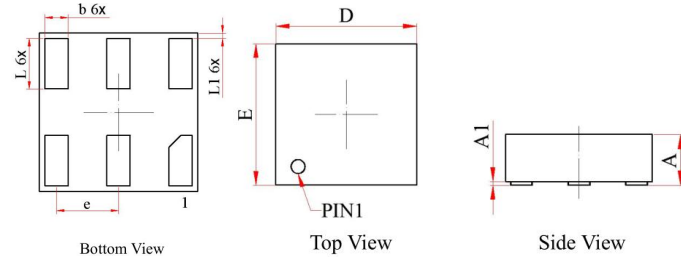


Figure 4. Typical Application of WD6208N

## ■ Package Outline Dimensions

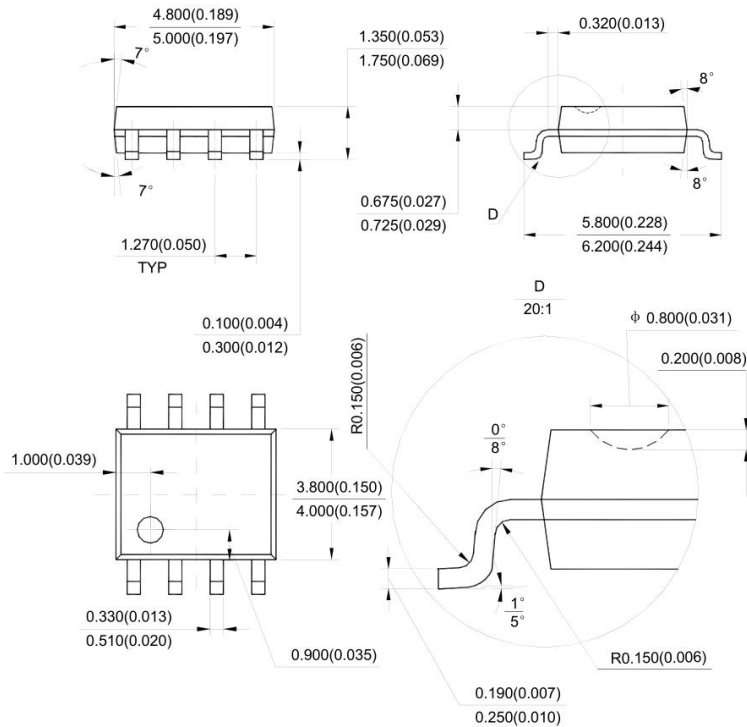
### DFN1×1-6

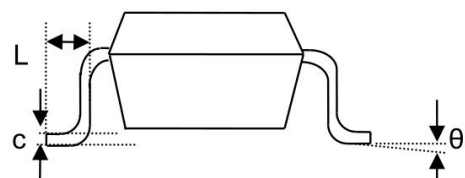
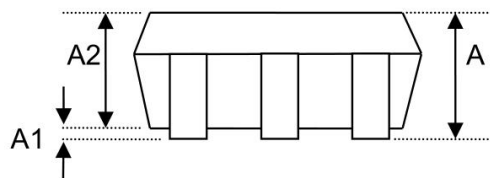
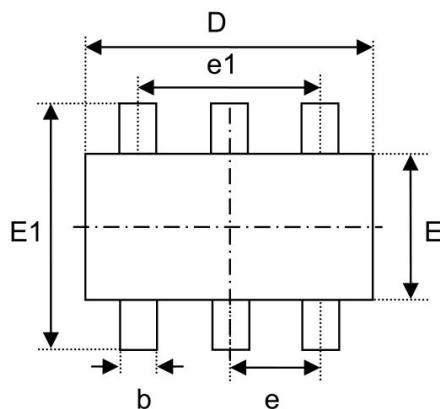


Symbol	Dimension In Millimeters			Dimension In Inches		
	Normal	Min	Max	Normal	Min	Max
A	--	0.320	0.380	--	0.013	0.015
A1	--	0.015	0.075	--	0.001	0.003
D	1.020	0.990	1.050	0.040	0.039	0.041
E	1.020	0.990	1.050	0.040	0.039	0.041
b	0.150	0.120	0.180	0.006	0.005	0.007
L	0.325	0.295	0.355	0.013	0.012	0.014
L1	0.035 REF			0.001 REF		
e	0.400 BSC			0.016 BSC		

### SOP- 8

Unit: mm(inch)



**SOT23- 6**


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 BSC		0.037 BSC	
e1	1.900 BSC		0.075 BSC	
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°