

# SHINDENGEN

## High Output Interface Driver ICs

MTA Series

### MTA001M

#### FEATURES

- Nine output drivers per package
- TTL/CMOS compatible inputs (Low active)
- Enable input

#### APPLICATION

- Head needle drive for printer • ECR
- Stepping motor drive for office automation products
- Display drive

#### RATINGS

##### ● Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Ratings	Unit
Output Voltage	V <sub>CEO(SUS)</sub>	80	V
Output Current	I <sub>O</sub>	2	A
Reverse Voltage(flyback diode)	V <sub>R</sub>	80	V
Forward Current(each flyback diode)	I <sub>F</sub>	2	A
Forward Current(each common terminal)	I <sub>F</sub>	10	A
Output Current(each GND terminal)	I <sub>GND</sub>	10	A
Logic Supply Voltage	V <sub>CC</sub>	0~7	V
Logic Input Voltage	V <sub>IN</sub>	0~V <sub>CC</sub>	V
Enable Input Voltage	V <sub>ENA</sub>	0~V <sub>CC</sub>	V
Total Power Dissipation	P <sub>T</sub>	5	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-40~150	°C

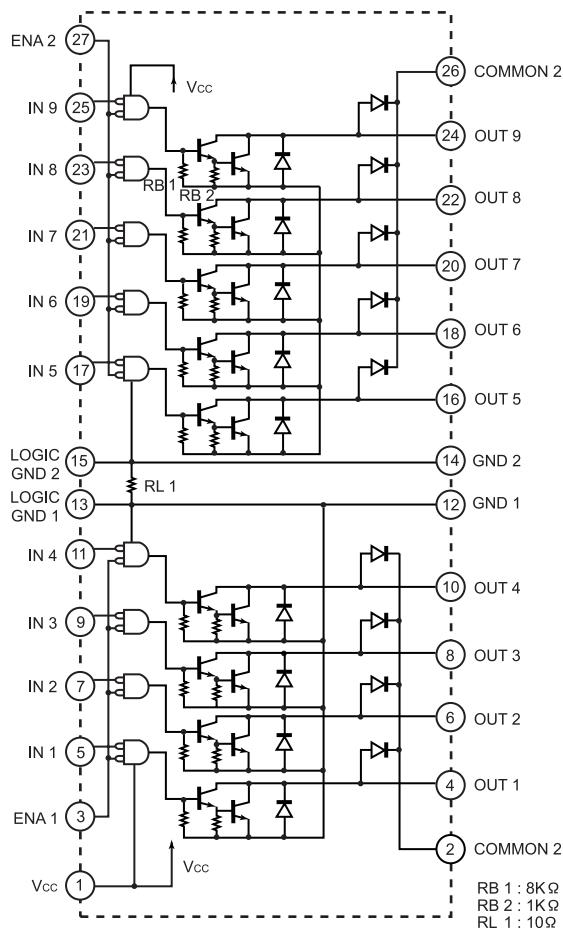
##### ● Electrical Characteristics (Ta=25°C)

Item	Symbol	Test Conditions	min.	typ.	max.	Unit
Output Saturation Voltage	V <sub>CE</sub> (sat)	V <sub>CC</sub> =5V, I <sub>C</sub> =1.5A, V <sub>IN</sub> =V <sub>ENA</sub> =0V		1.4	1.7	V
Output Leakage Current	I <sub>CE</sub>	V <sub>CE</sub> =80V			10	μA
Logic Supply Current(Standby)	I <sub>CC</sub> (OFF)	V <sub>CC</sub> =5V, V <sub>IN</sub> ="H"		20	30	mA
Logic Supply Current(All Circuit ON)	I <sub>CC</sub> (ON)	V <sub>CC</sub> =5V, V <sub>IN</sub> ="L"		75	90	mA
Input High Voltage	V <sub>INH</sub>	V <sub>CC</sub> = 5V	2.7			V
Input Low Voltage	V <sub>INL</sub>	V <sub>CC</sub> = 5V			1.5	V
Logic High Input Current	I <sub>INH</sub>	V <sub>CC</sub> = 5V, V <sub>IN</sub> =2.7V			10	μA
Logic Low Input Current	I <sub>INL</sub>	V <sub>CC</sub> = 5V, V <sub>IN</sub> =0V		-10	-50	μA
Enable "H" Input Voltage	V <sub>ENAH</sub>	V <sub>CC</sub> =5V	2.7			V
Enable "L" Input Voltage	V <sub>ENAL</sub>	V <sub>CC</sub> =5V			1.5	V
Enable "H" Input Current	I <sub>ENAH</sub>	V <sub>CC</sub> =5V, V <sub>ENA</sub> =2.7V			10	μA
Enable "L" Input Current	I <sub>ENAL</sub>	V <sub>CC</sub> =5V, V <sub>ENA</sub> =0V	-25	-100		μA
Thermal Resistance	θ <sub>jc</sub>				3.57	°C/W
	θ <sub>ja</sub>				25	
Reverse Current(each flyback diode)	I <sub>R</sub>	V <sub>R</sub> =80V			10	μA
Reverse Voltage(flyback diode)	V <sub>F</sub>	I <sub>F</sub> =1.5A		1.4	1.7	V
Dielectric Strength	V <sub>ISO</sub>	Substrate to Terminals	500			V

# High Output Interface Driver ICs

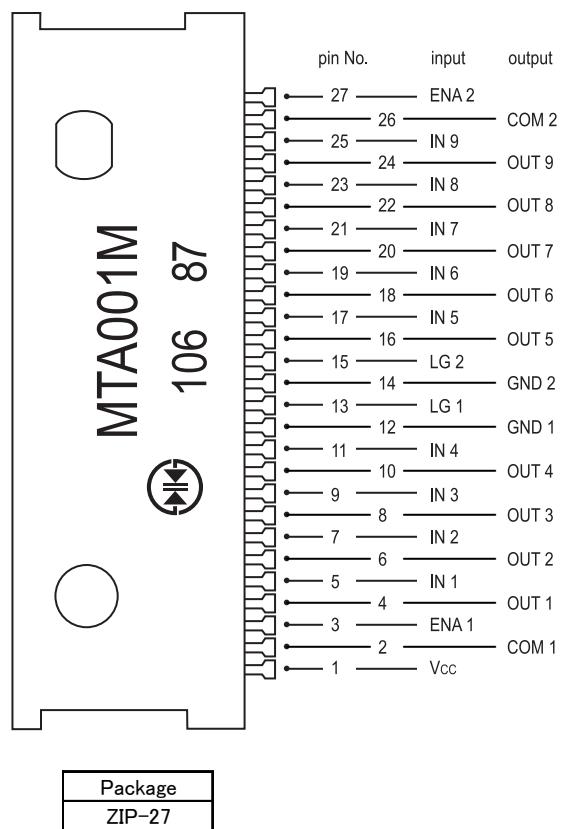
**MTA001M**

## ● Equivalent Circuit



Note) Please connect the terminal 12~15  
to the GND at outside correctly.

## ● Pin Assignment



Package  
ZIP-27

## ● True Table

V <sub>CC</sub>	V <sub>IN</sub>	V <sub>EN<sub>A</sub></sub>	Output Transistor
L	X	X	OFF
H	H	H	OFF
H	H	L	OFF
H	L	H	OFF
H	L	L	ON

## ● Recommended Operating Conditions (Ta=25°C)

Item	Symbol	min.	typ.	max.	Unit
Supply Voltage	V <sub>CC</sub>	4.5	5.0	5.5	V
Output Current	I <sub>C IF</sub>			1.5	A
Output Voltage	V <sub>CE VR</sub>			70	V
Junction Temperature	T <sub>j</sub>	-25		120	°C

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