

SHINDENGEN

High Output Interface Driver ICs

MTA Series

MTA011

FEATURES

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

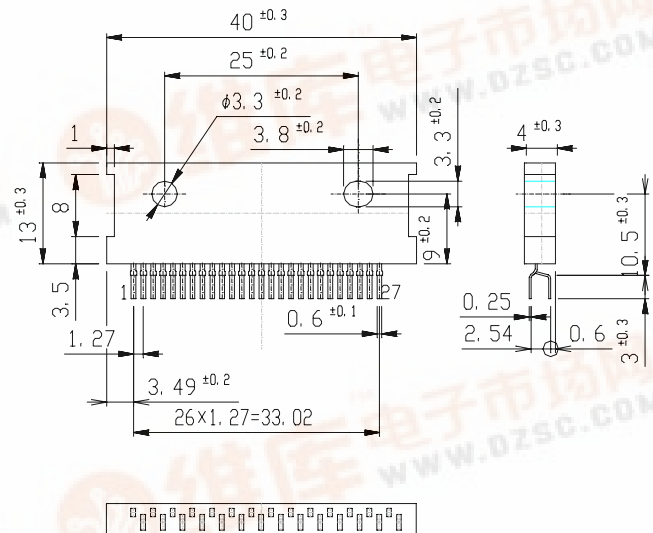
APPLICATION

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

OUTLINE DIMENSIONS

Case : ZIP-27

(Unit : mm)



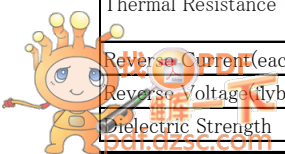
RATINGS

● Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Ratings	Unit
Output Voltage	$V_{CEO(SUS)}$	80	V
Output Current	I_O	2	A
Reverse Voltage(flyback diode)	V_R	80	V
Forward Current(each flyback diode)	I_F	2	A
Forward Current(each common terminal)	I_F	10	A
Output Current(each GND terminal)	I_{GND}	10	A
Logic Supply Voltage	V_{CC}	0~7	V
Logic Input Voltage	V_{IN}	0~ V_{CC}	V
Enable Input Voltage	V_{ENA}	0~ V_{CC}	V
Total Power Dissipation	P_T	5	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-40~150	°C

● Electrical Characteristics (Ta=25°C)

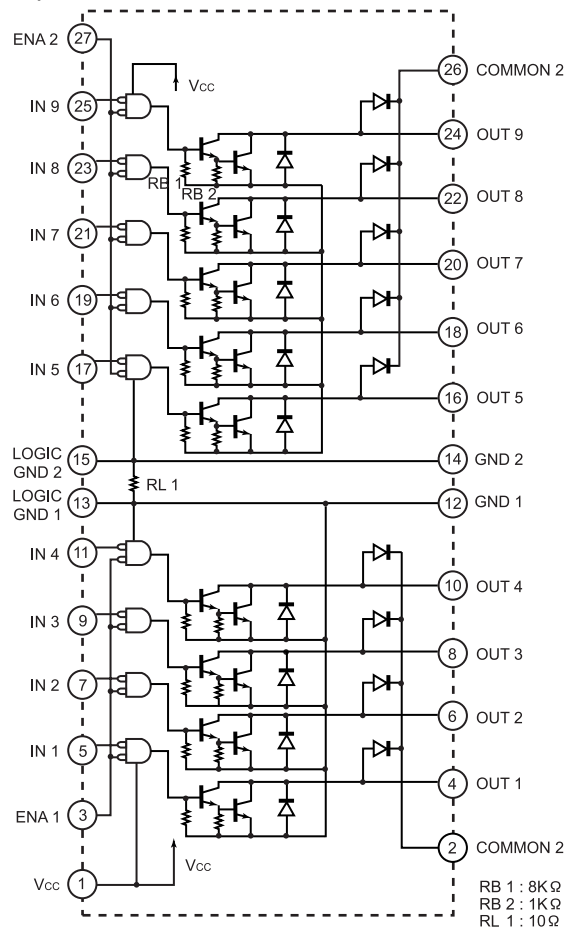
Item	Symbol	Test Conditions	min.	typ.	max.	Unit
Output Saturation Voltage	$V_{CE(sat)}$	$V_{CC}=5V, I_C=1.5A, V_{IN}=V_{ENA}=5V$		1.4	1.7	V
Output Leakage Current	I_{CE}	$V_{CE}=80V$			10	μA
Logic Supply Current(Standby)	$I_{CC(OFF)}$	$V_{CC}=5V, V_{IN}="L"$		20	30	mA
Logic Supply Current(All Circuit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



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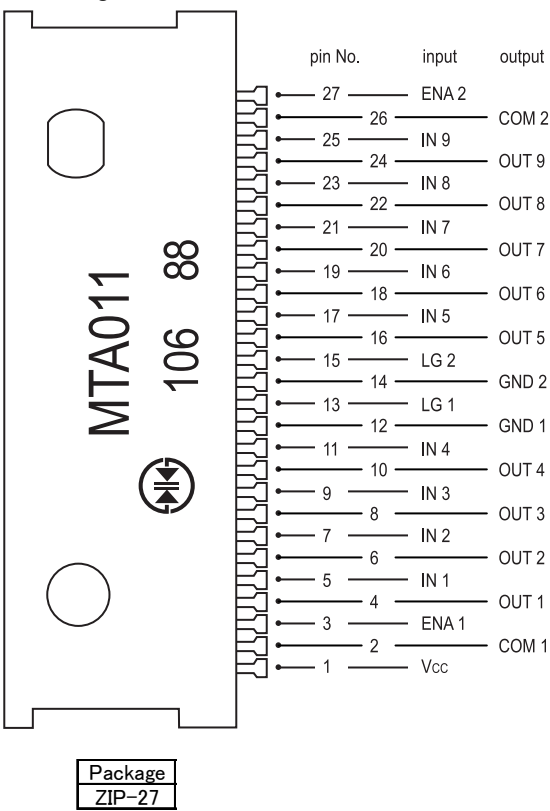
MTA011

●Equivalent Circuit



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

●Pin Assignment



●True Table

V _{CC}	V _{IN}	V _{ENA}	Output Transistor
L	X	X	OFF
H	H	H	ON
H	H	L	OFF
H	L	H	OFF
H	L	L	OFF

●Recommended Operating Conditions (Ta=25°C)

Item	Symbol	min.	typ.	max.	Unit
Supply Voltage	V _{CC}	4.5	5.0	5.5	V
Output Current	I _C I _F			1.5	A
Output Voltage	V _{CE} V _R			70	V
Junction Temperature	T _j	-25		120	°C