

MTA002

FEATURES

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

APPLICATION

- Head needle drive for printer
- Display drive

RATINGS

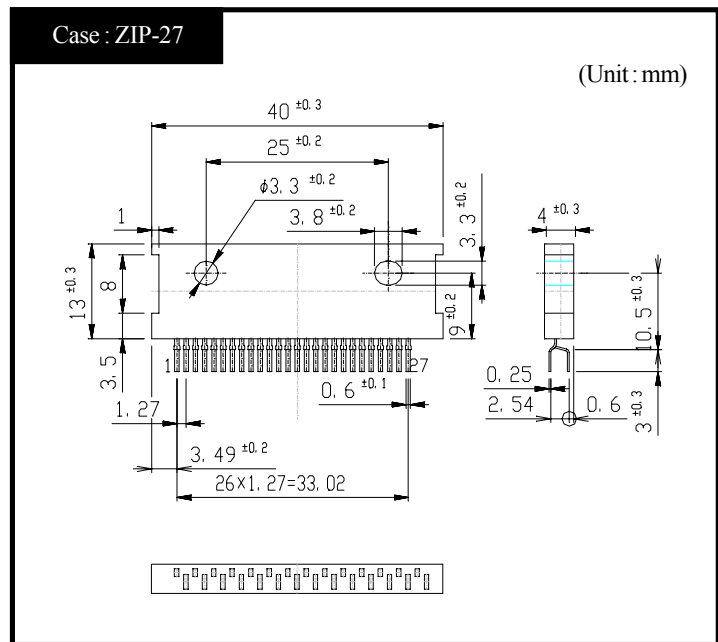
● Absolute Maximum Ratings (Ta=25°C)

| Item | Symbol | Ratings | Unit |
|---------------------------------------|----------------|-------------|------|
| Output Voltage | $V_{CEO(SUS)}$ | 60 | V |
| Output Current | I_O | 2 | A |
| Reverse Voltage(flyback diode) | V_R | 60 | 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 |

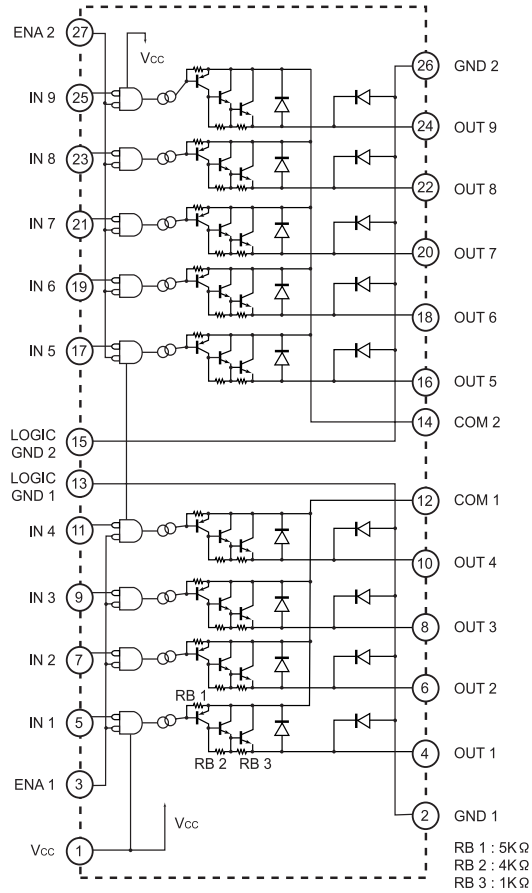
● Electrical Characteristics (Ta=25°C)

| Item | Symbol | Test Conditions | min. | typ. | max. | Unit |
|--------------------------------------|---------------|--|------|------|------|---------|
| Output Saturation Voltage | $V_{CE(sat)}$ | $V_{CC}=5V, I_c=1.5A, V_{IN}=V_{ENA}=0V$ | | 2.0 | 2.5 | V |
| Output Leakage Current | I_{CE} | $V_{CE}=60V$ | | | 10 | μA |
| Logic Supply Current(Standby) | $I_{CC(OFF)}$ | $V_{CC}=5V, V_{IN}="H"$ | | 15 | 20 | mA |
| Logic Supply Current(All Circuit ON) | $I_{CC(ON)}$ | $V_{CC}=5V, V_{IN}="L"$ | | 15 | 20 | 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} | $V_{CC} = 5V, V_{IN}=0V$ | | -10 | -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} | $V_{CC}=5V, V_{ENA}=0V$ | | -25 | -100 | μA |
| Thermal Resistance | θ_{jc} | | | | 3.57 | °C/W |
| | θ_{ja} | | | | 25 | °C/W |
| Reverse Current(each flyback diode) | I_R | $V_R=60V$ | | | 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 |

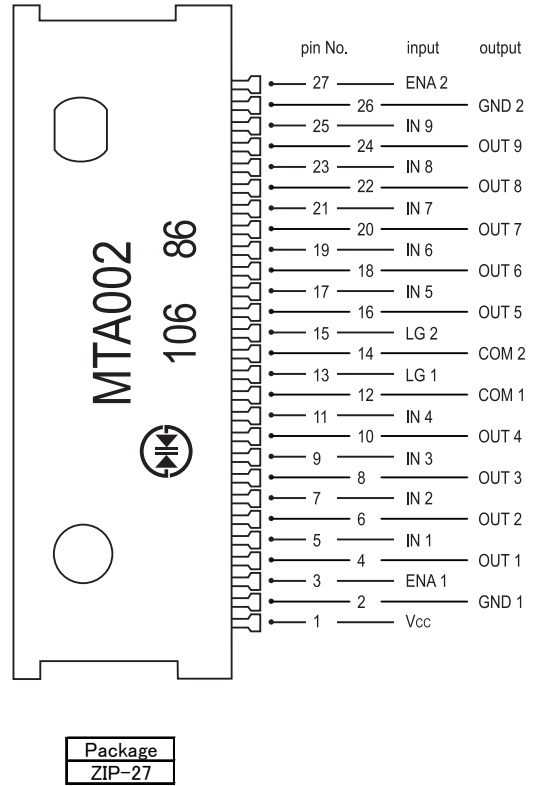
OUTLINE DIMENSIONS



● Equivalent Circuit



● Pin Assignment



● True Table

| Vcc | V _{IN} | V _{ENA} | Output Transistor |
|-----|-----------------|------------------|-------------------|
| L | × | × | 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 | Vcc | 4.5 | 5.0 | 5.5 | V |
| Output Current | I _C I _F | | | 1.5 | A |
| Output Voltage | V _{CE} V _R | | | 50 | V |
| Junction Temperature | T _j | -25 | | 120 | °C |