

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

TD62M4601F

4CH LOW SATURATION VOLTAGE SOURCE DRIVER

TD62M4601F is Multi Chip IC incorporates 4 low saturation discrete (2SA1357) transistors. This IC is suitable for a battery use motor drive and LED display module applications.

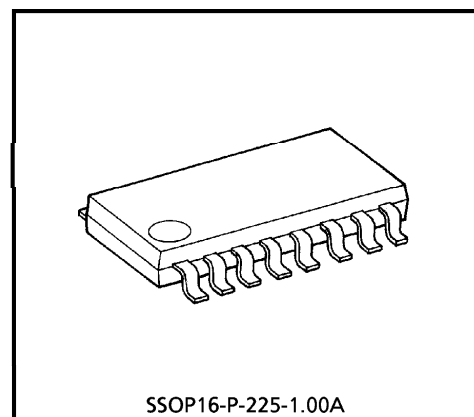
FEATURES

- Suitable for Motor drive circuit and LED display module
- External Bias Resistor
- Low Saturation Voltage

$$V_{CE(sat)} = 0.12V \text{ (Typ.) at } I_C = 1A$$

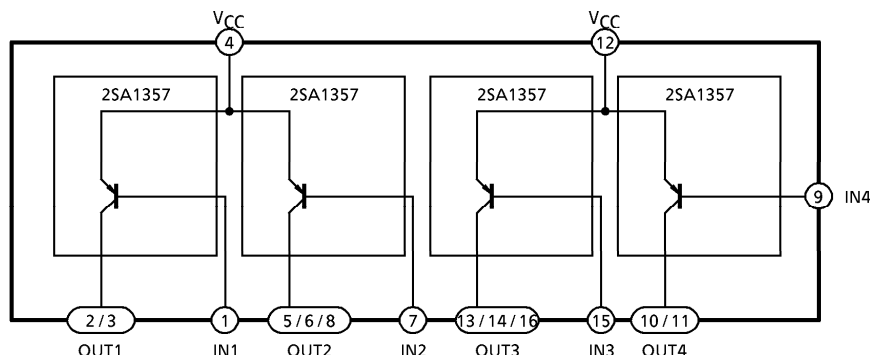
$$V_{CE(sat)} = 0.25V \text{ (Typ.) at } I_C = 2A$$

- SSOP16 1mm pitch small package sealed

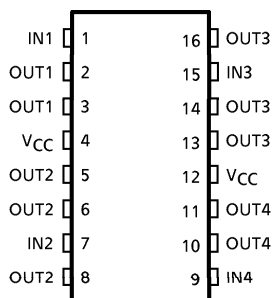


Weight : 0.14g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



961001EBA2

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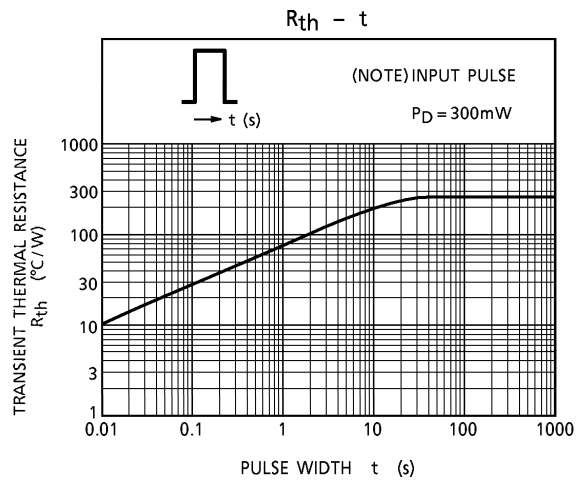
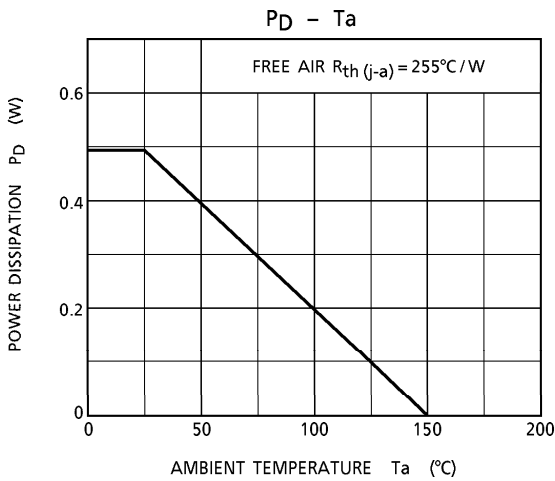
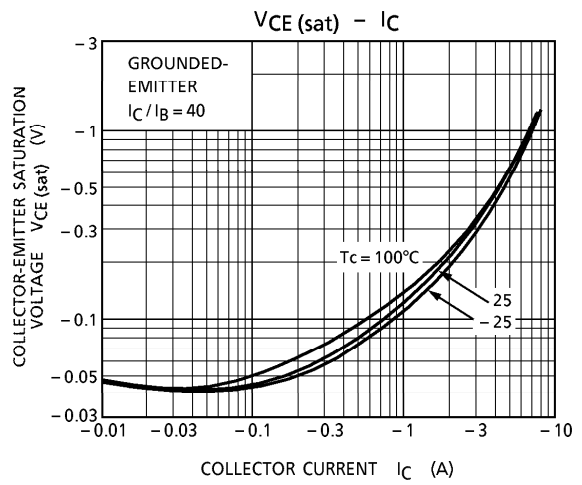
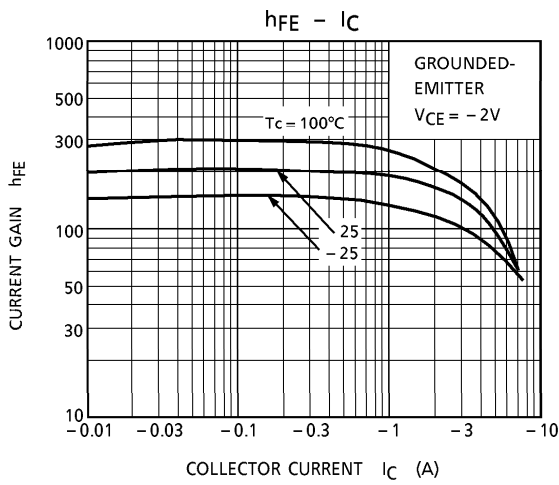
MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------|-----------------------|------------|--------|
| Supply Voltage | V _{CC} | - 20 | V |
| Breakdown Voltage | V _{CB0} | - 20 | V |
| | V _{CEO} | - 20 | |
| | V _{EBO} | - 8 | |
| Output Current | I _O | - 2 | A / ch |
| | I _O (PEAK) | (Note) - 4 | |
| Base Current | I _B | - 1 | A |
| Power Dissipation | P _D | 490 | mW |
| Junction Temperature | T _j | 150 | °C |
| Operating Temperature | T _{opr} | - 40~85 | °C |
| Storage Temperature | T _{stg} | - 55~150 | °C |

(Note) T = 10ms MAX. and maximum duty is less than 30%.

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CIR-CUIT | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|------------------------------|-----------------------|---------------|---|------|--------|--------|------|
| Current Gain | h _{FE} (1) | — | V _{CE} = - 2V, I _C = - 0.5A | 100 | — | 320 | — |
| | h _{FE} (2) | — | V _{CE} = - 2V, I _C = - 2.0A | 70 | 140 | — | |
| Saturation Voltage | V _{CE} (sat) | — | I _C = - 1A, I _B = - 25mA | — | - 0.12 | - 0.25 | V |
| | | | I _C = - 2A, I _B = - 50mA | — | - 0.25 | - 0.50 | |
| Transition Frequency | f _T | — | V _{CE} = - 2V, I _C = - 0.5A | — | 100 | — | MHz |
| Leakage Current | I _{OL} | — | V _{CC} = - 20V | — | 0 | - 10 | μA |
| Base-Emitter Forward Voltage | V _{BE} | — | V _{CE} = - 2V, I _C = 2.0A | — | - 0.84 | - 1.5 | V |

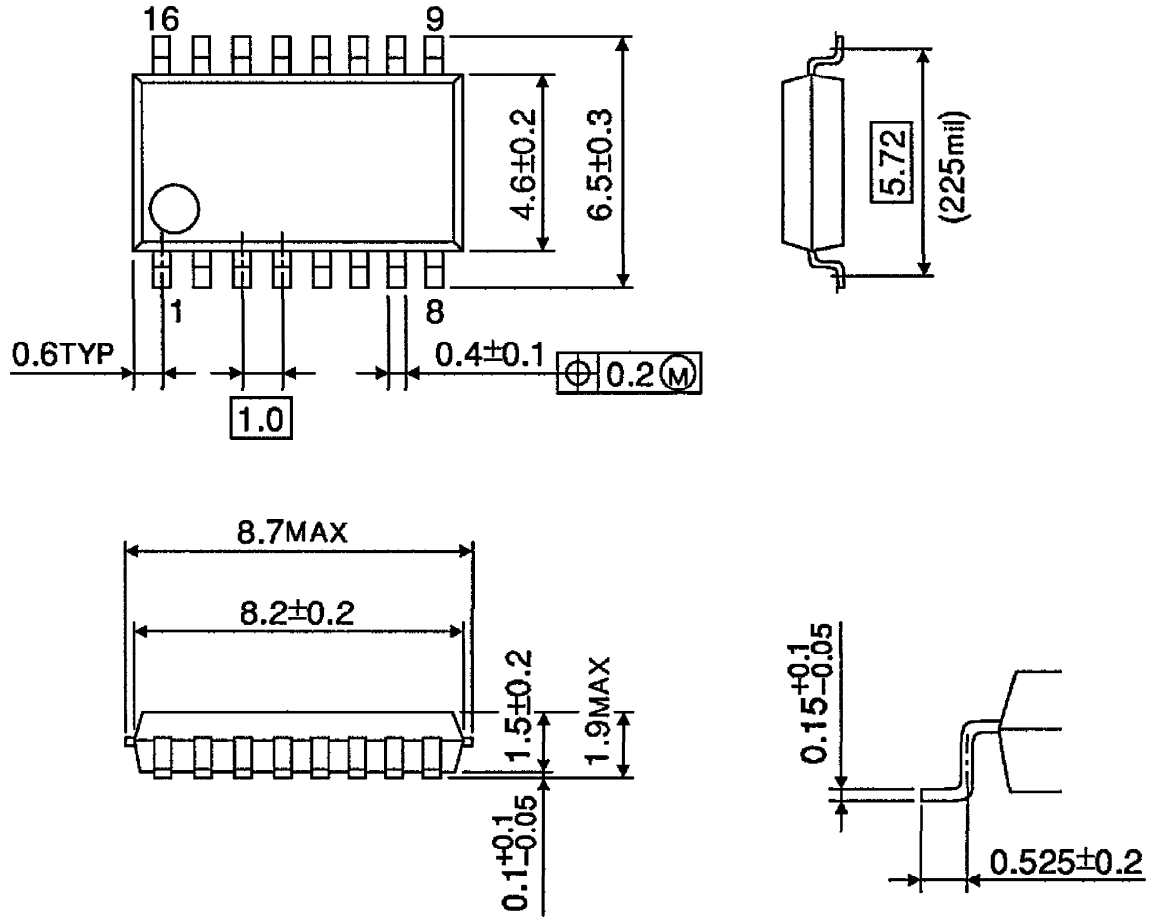


PRECAUTIONS for USING

Utmost care is necessary in the design of the output line, V_{CC} and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

OUTLINE DRAWING
SSOP16-P-225-1.00A

Unit : mm



Weight : 0.14g (Typ.)