

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

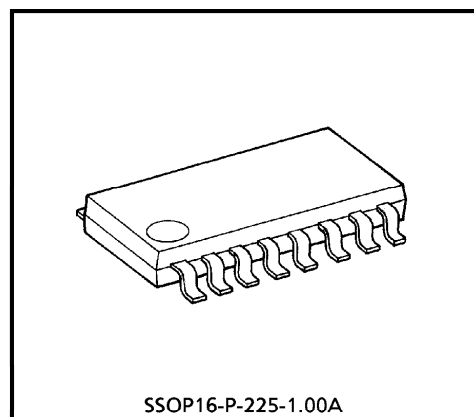
# TD62M4600F

## 4CH LOW SATURATION VOLTAGE SOURCE DRIVER

TD62M4600F is Multi Chip IC incorporates 4 low saturation discrete transistors which equipped Fly-wheeling Diodes and Bias resistor.  
This IC is suitable for a battery use motor drive and LED display module applications.

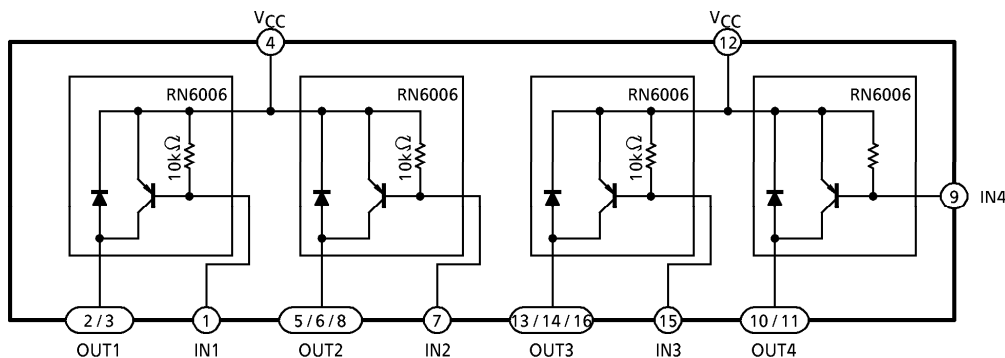
### FEATURES

- Suitable for Motor drive circuit and LED display module
- Bias Resistor and Diodes are equipped :  $R = 10k\Omega$
- Low Saturation Voltage  
 $V_{CE(sat)} = 0.16V$  (Typ.) at  $I_C = 1A$   
 $V_{CE(sat)} = 0.30V$  (Typ.) at  $I_C = 2A$
- SSOP16 1mm pitch small package sealed

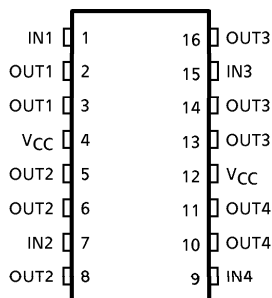


Weight : 0.14g (Typ.)

### BLOCK DIAGRAM



### PIN CONNECTION (TOP VIEW)



961001EBA2

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## MAXIMUM RATINGS (Ta = 25°C)

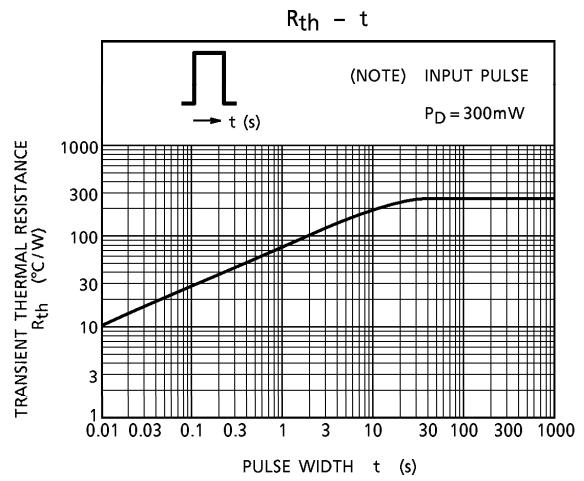
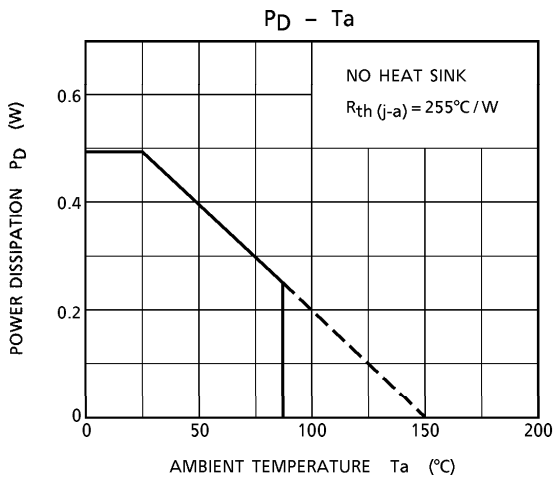
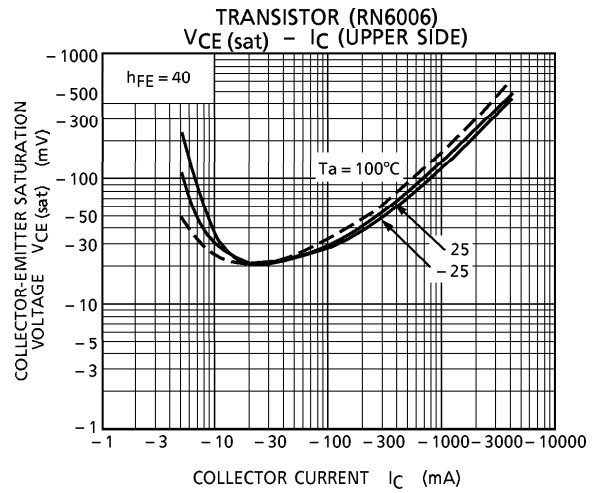
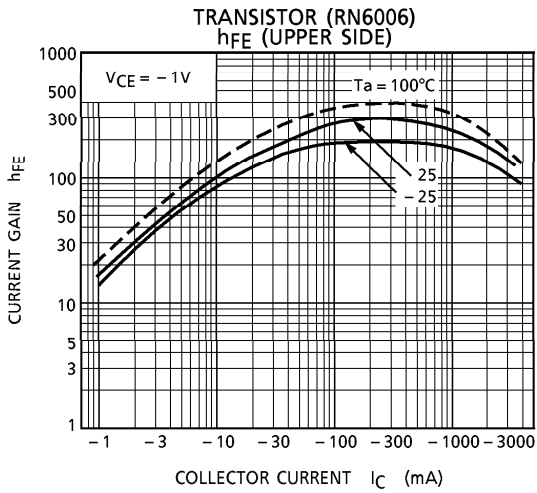
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	- 10	V
Breakdown Voltage	V <sub>CB0</sub>	- 10	V
	V <sub>CER</sub>	- 10	
	V <sub>EBO</sub>	- 6	
Output Current	I <sub>O</sub>	- 2	A / ch
	I <sub>O</sub> (PEAK)	(Note 1) - 4	
Base Current	I <sub>B</sub> (AVE)	- 0.4	A
	I <sub>B</sub> (PEAK)	- 0.8	
Fly-wheeling Diode Forward Current	I <sub>F</sub>	(Note 2) - 2	A
Power Dissipation	P <sub>D</sub>	490	mW
Junction Temperature	T <sub>j</sub>	150	°C
Operating Temperature	T <sub>opr</sub>	- 40~85	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

(Note 1) T = 10ms MAX. and maximum duty is less than 30%.

(Note 2) T = 10ms single pulse

## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Current Gain	h <sub>FE</sub> (1)	—	V <sub>CE</sub> = - 1V, I <sub>C</sub> = - 0.5A	160	—	600	—
	h <sub>FE</sub> (2)	—	V <sub>CE</sub> = - 1V, I <sub>C</sub> = - 1.5A	60	130	—	
Saturation Voltage	V <sub>CE</sub> (sat)	—	I <sub>C</sub> = - 1A, I <sub>B</sub> = - 25mA	—	- 0.13	- 0.25	V
			I <sub>C</sub> = 2A, I <sub>B</sub> = - 50mA	—	- 0.25	- 0.50	
Transition Frequency	f <sub>T</sub>	—	V <sub>CE</sub> = - 2V, I <sub>C</sub> = - 0.5A	—	150	—	MHz
Leakage Current	I <sub>OL</sub>	—	V <sub>CC</sub> = - 10V	—	0	- 10	μA
Fly-wheeling Diode Forward Voltage	V <sub>F</sub>	—	I <sub>F</sub> = - 300mA	—	- 0.89	- 1.2	V
			I <sub>F</sub> = - 450mA, 10ms	—	- 1.60	—	
Base-Emitter Resistor	R <sub>BE</sub>	—	—	7	10	13	kΩ
Base-Emitter Forward Voltage	V <sub>BE</sub>	—	V <sub>CE</sub> = - 1V, I <sub>C</sub> = - 2.0A	—	- 0.84	- 1.5	V

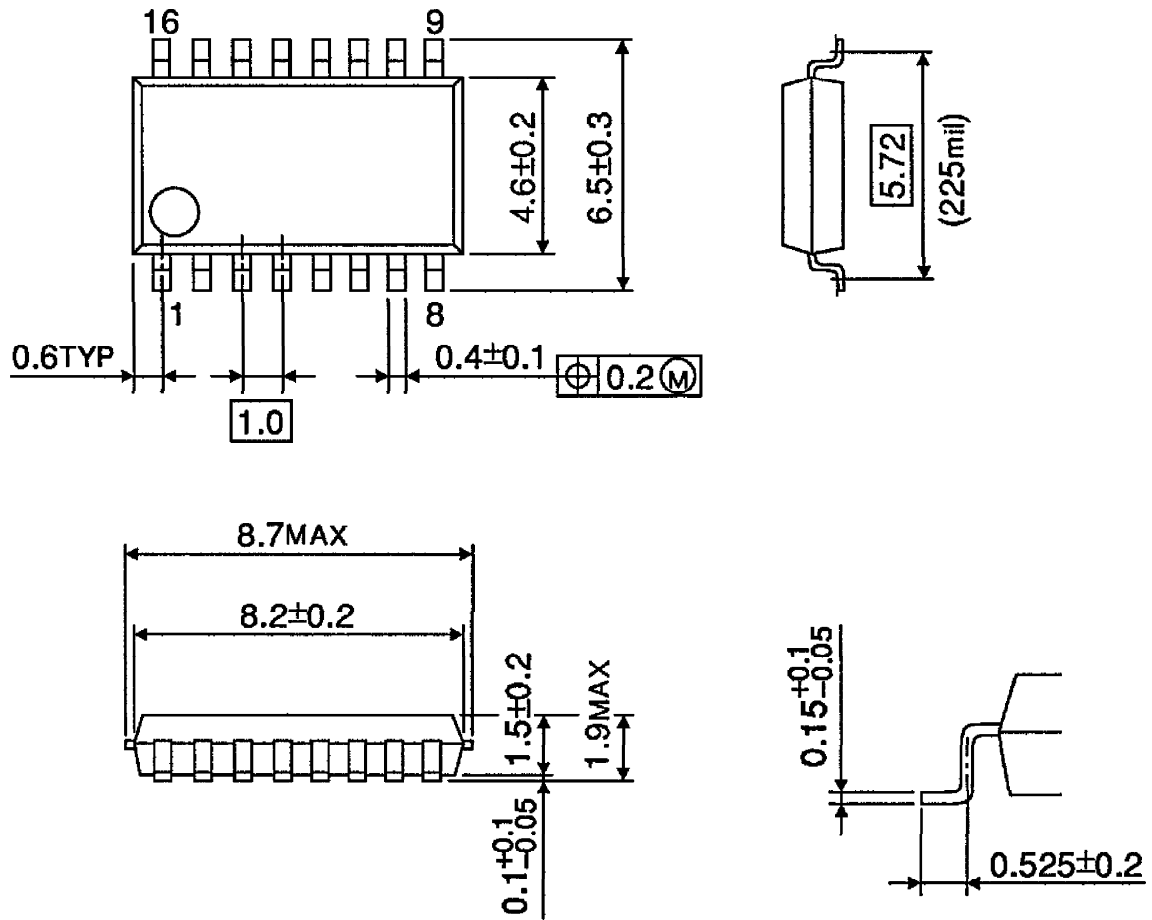


PRECAUTIONS for USING

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.)