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TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

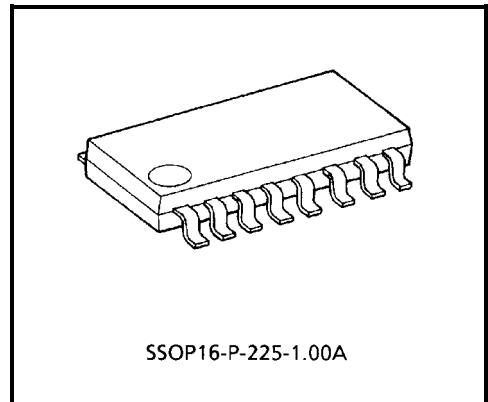
# TD62M4501F

## 4CH LOW SATURATION VOLTAGE SINK DRIVER

TD62M4501F is Multi Chip IC incorporates 4 low saturation discrete (2SC3420) transistors. This IC is suitable for a battery use motor drive and LED display module applications.

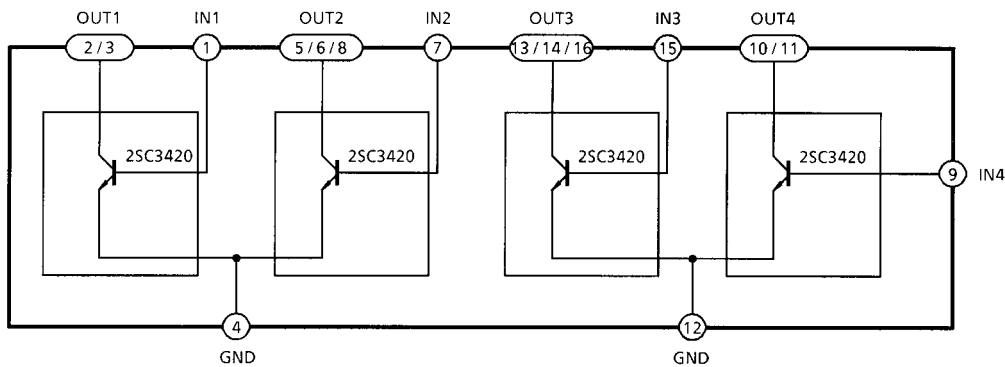
### FEATURES

- Suitable for Motor drive circuit and LED display module
- External Bias resistor
- Low Saturation Voltage  
 $V_{CE(sat)} = 0.12\text{ V (Typ.) at } I_C = 1\text{ A}$   
 $V_{CE(sat)} = 0.25\text{ V (Typ.) at } I_C = 2\text{ A}$
- SSOP16 (1 mm pitch) small package sealed

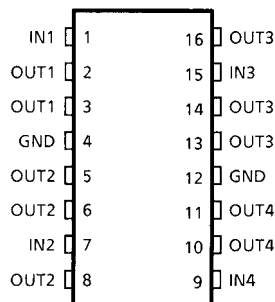


Weight : 0.14 g (Typ.)

### BLOCK DIAGRAM



### PIN CONNECTION (TOP VIEW)



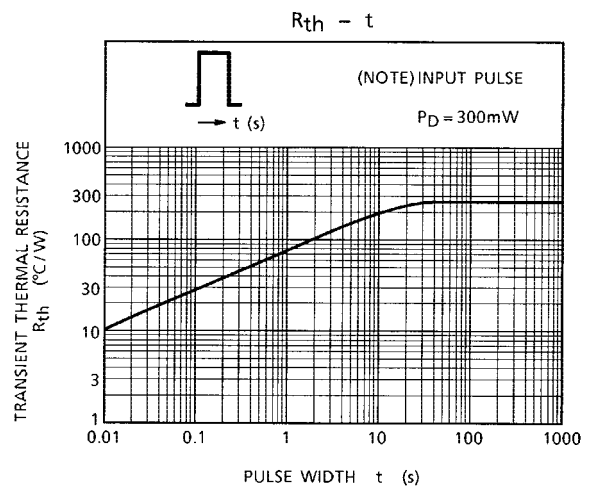
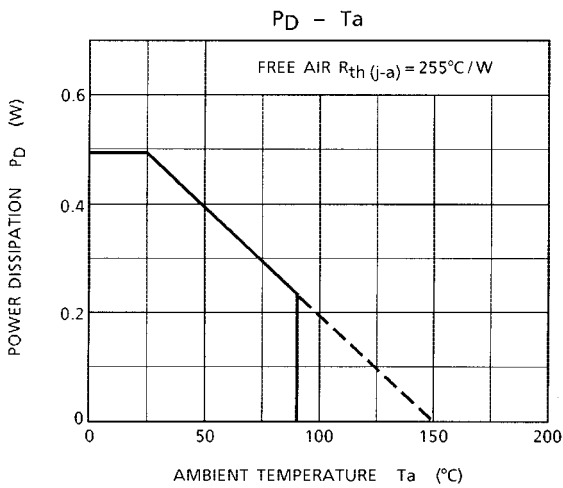
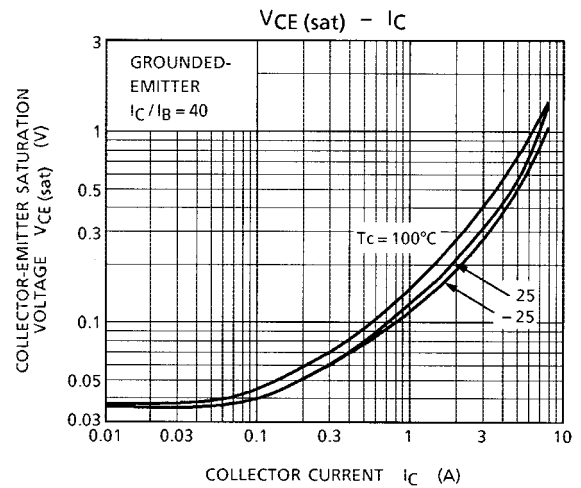
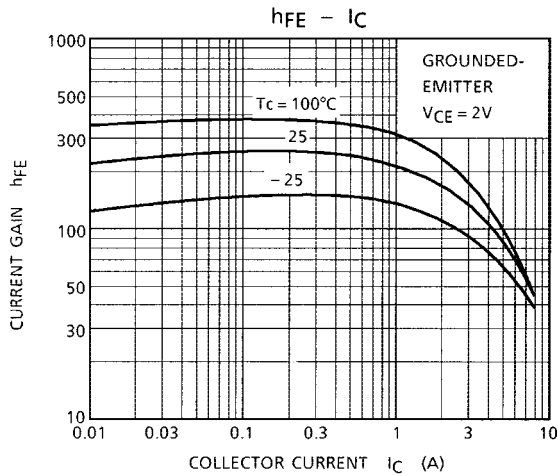
## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	20	V
Breakdown Voltage	V <sub>CBO</sub>	20	V
	V <sub>CEO</sub>	20	
	V <sub>EBO</sub>	8	
Output Current	I <sub>O</sub> (AVE)	2	A
	I <sub>O</sub> (PRAK)	4 (Note)	
Base Current	I <sub>B</sub>	1	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: T = 10 ms 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 <sub>FE</sub> (1)	—	V <sub>CE</sub> = 2 V, I <sub>C</sub> = 0.5 A	140	—	600	—
	h <sub>FE</sub> (2)		V <sub>CE</sub> = 2 V, I <sub>C</sub> = 2.0 A	70	140	—	
Saturation Voltage	V <sub>CE</sub> (sat)	—	I <sub>C</sub> = 1 A, I <sub>B</sub> = 25 mA	—	0.12	0.25	V
			I <sub>C</sub> = 2 A, I <sub>B</sub> = 50 mA	—	0.25	0.50	
Transition Frequency	f <sub>T</sub>	—	V <sub>CE</sub> = 2 V, I <sub>C</sub> = 0.5 A	—	100	—	MHz
Leakage Current	I <sub>OL</sub>	—	V <sub>CC</sub> = 20 V	—	0	10	μA
Base-Emitter Forward Voltage	V <sub>BE</sub>	—	V <sub>CE</sub> = 2 V, I <sub>C</sub> = 2.0 A	—	0.84	1.5	V



**PRECAUTIONS for USING**

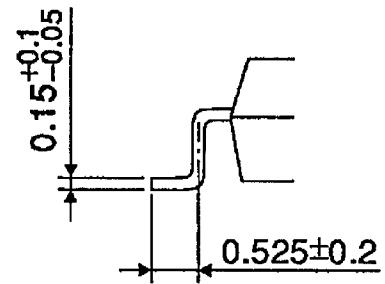
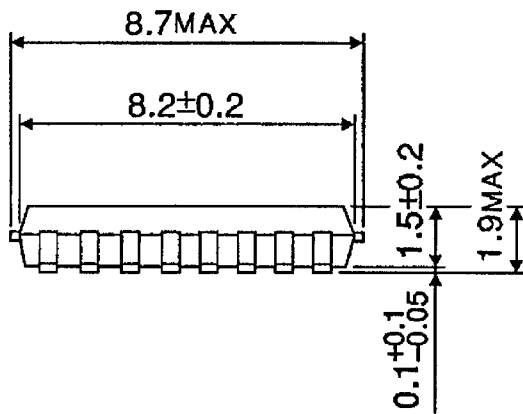
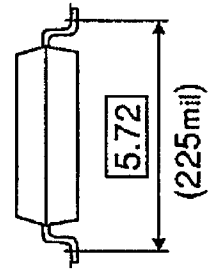
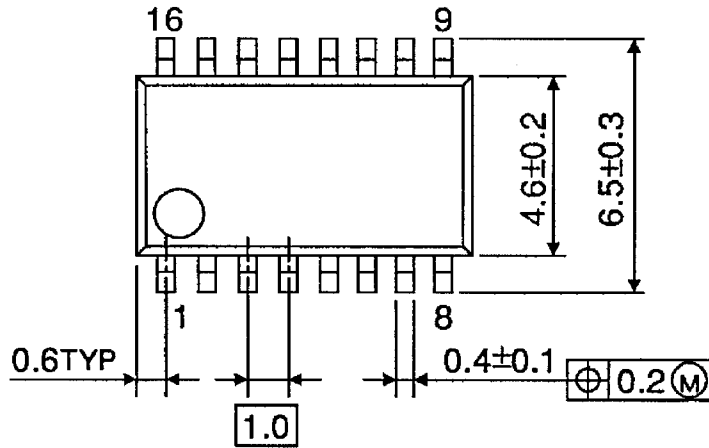
This IC does not integrate protection circuits such as overcurrent and overvoltage protectors. Thus, if excess current or voltage is applied to the IC, the IC may be damaged. Please design the IC so that excess current or voltage will not be applied to the IC.

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

## PACKAGE DIMENSIONS

SSOP16-P-225-1.00A

Unit: mm



Weight: 0.14 g (Typ.)

**RESTRICTIONS ON PRODUCT USE**

000707EBA

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