

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

TD62M4500F

4CH LOW SATURATION VOLTAGE SINK DRIVER

TD62M4500F 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.

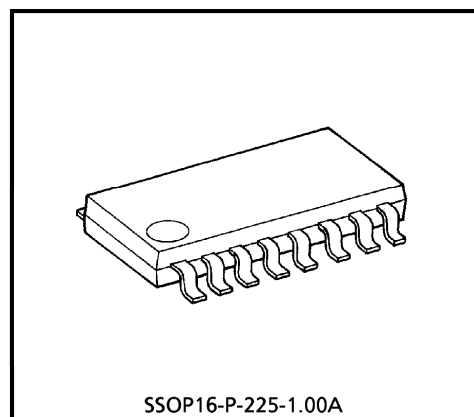
FEATURES

- 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 $I_C = 1A$

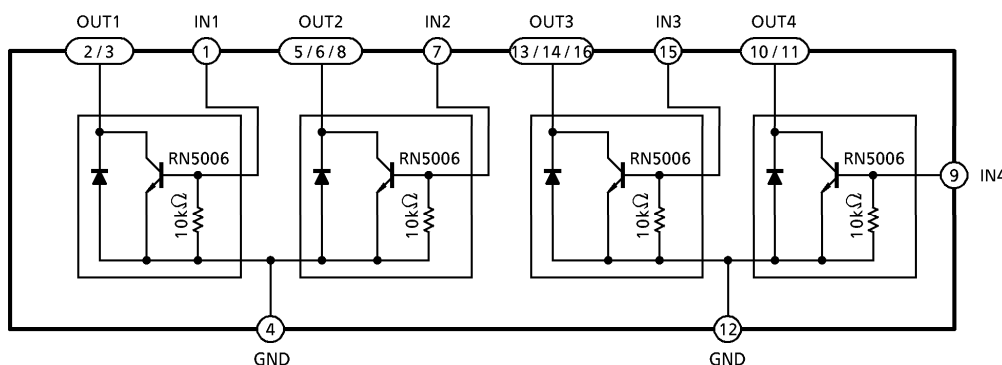
$V_{CE(sat)} = 0.30V$ (Typ.) at $I_C = 2A$

- SSOP16 1mm pitch small package sealed

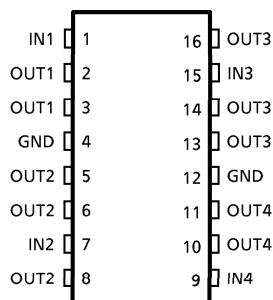


Weight : 0.14g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



961001EBA2

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MAXIMUM RATINGS (Ta = 25°C)

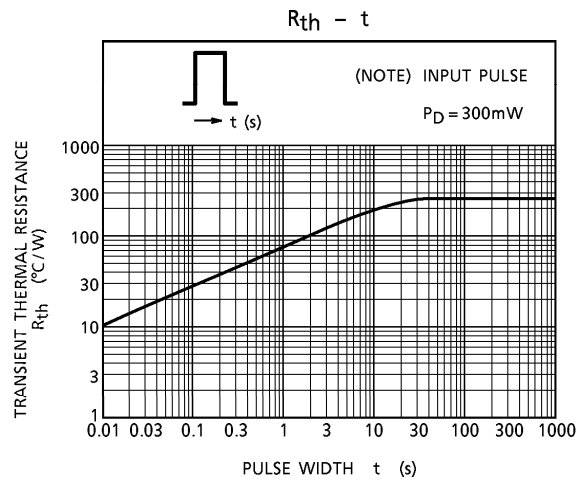
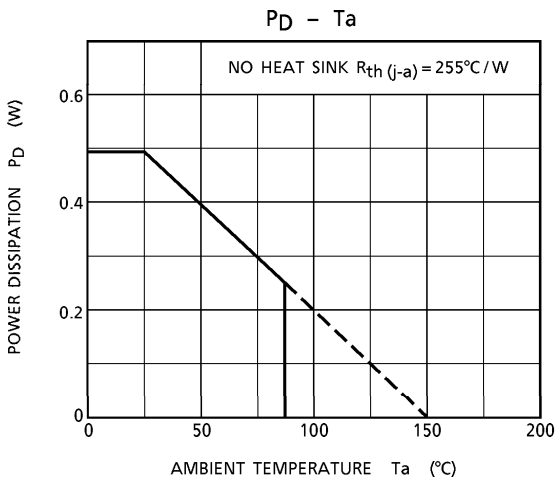
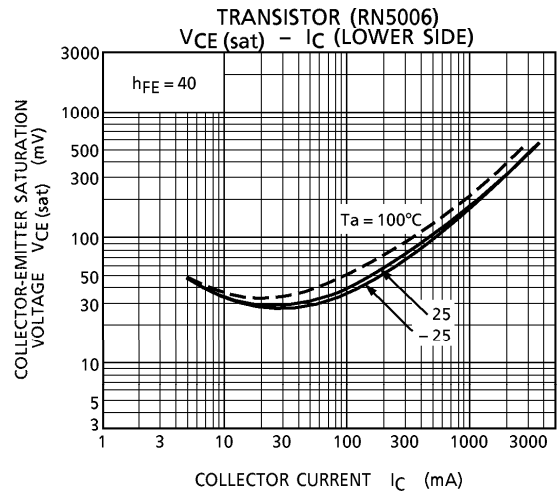
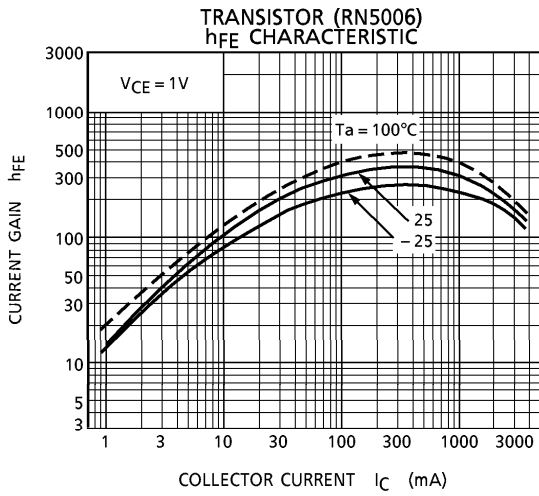
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	10	V
Breakdown Voltage	V _{CB0}	10	V
	V _{CER}	10	
	V _{EBO}	6	
Output Current	I _O (AVE)	2	A
	I _O (PEAK)	(Note 1) 4	
Base Current	I _B (AVE)	0.4	A
	I _B (PEAK)	0.8	
Fly-wheeling Diode Forward Current	I _F	(Note 2) 2	A
Power Dissipation	P _D	490	mW
Junction Temperature	T _j	150	°C
Operating Temperature	T _{opr}	-40~85	°C
Storage Temperature	T _{stg}	-55~150	°C

(Note 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 CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Current Gain	h _{FE} (1)	—	V _{CE} = 1V, I _C = 0.5A	160	—	600	—
	h _{FE} (2)	—	V _{CE} = 1V, I _C = 1.5A	60	130	—	
Saturation Voltage	V _{CE} (sat)	—	I _C = 1A, I _B = 25mA	—	0.16	0.32	V
			I _C = 2A, I _B = 50mA	—	0.30	0.50	
Transition Frequency	f _T	—	V _{CE} = 2V, I _C = 0.5A	—	150	—	MHz
Leakage Current	I _{OL}	—	V _{CC} = 10V	—	0	10	μA
Fly-wheeling Diode Forward Current	V _F	—	I _F = 300mA	—	0.89	1.2	V
			I _F = 450mA, 10ms	—	1.60	—	
Base-Emitter Resistor	R _{BE}	—	—	7	10	13	kΩ
Base-Emitter Forward Voltage	V _{BE}	—	V _{CE} = 1V, I _C = 2.0A	—	0.84	1.5	V

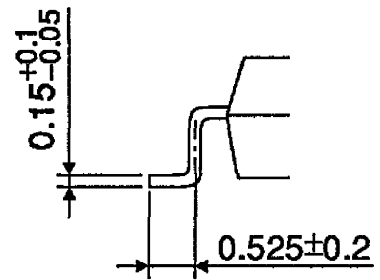
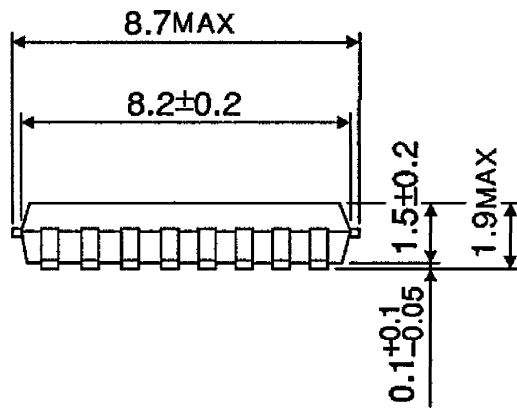
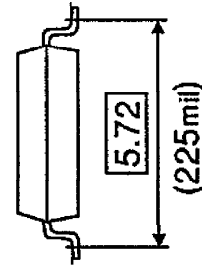
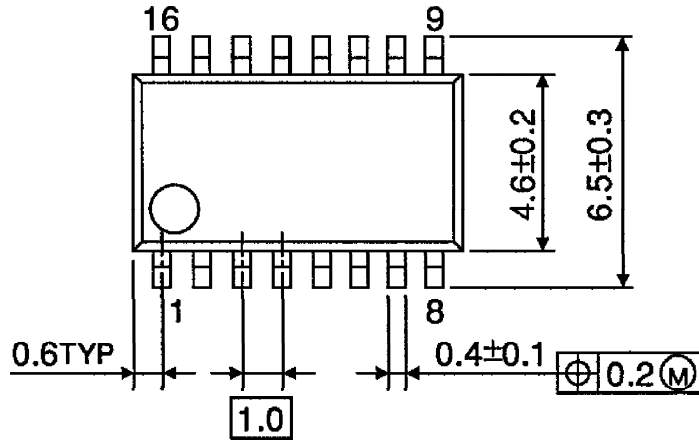


PRECAUTIONS for USING

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.)