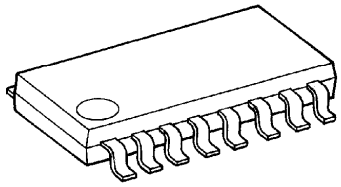
TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

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.



SSOP16-P-225-1.00A

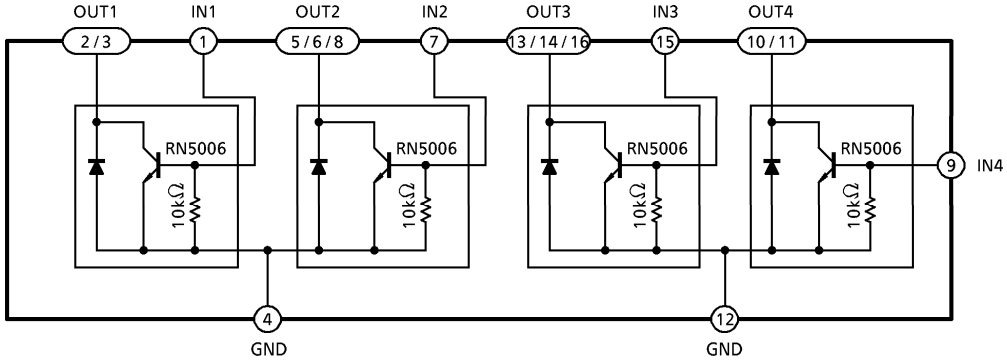
Weight : 0.14g (Typ.)

FEATURES

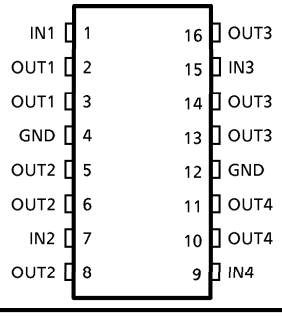
- Suitable for Motor drive circuit and LED display module
- Bias resistor and diodes are equipped : R = 10kΩ
- Low Saturation Voltage

  $V_{CE\ (sat)}$ = 0.16V (Typ.) at I_C = 1A
  $V_{CE\ (sat)}$ = 0.30V (Typ.) at I_C = 2A
- SSOP16 1mm pitch small package sealed

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



961001EBA2

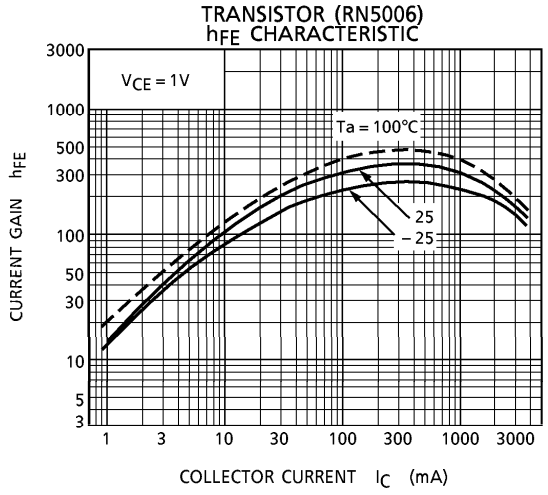
MAXIMUM RATINGS (Ta = 25°C)

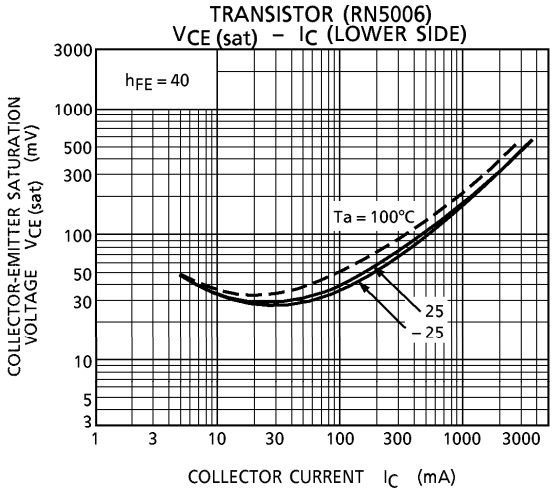
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	10	V
Breakdown Voltage	V_{CBO}	10	V
	V_{CER}	10	
	V_{EBO}	6	
Output Current	$I_{O\ (AVE)}$	2	A
	$I_{O\ (PEAK)}$	(Note 1) 4	
Base Current	$I_{B\ (AVE)}$	0.4	A
	$I_{B\ (PEAK)}$	0.8	
Fly-wheeling Diode Forward Current	I_F	(Note 2) 2	A
Power Dissipation	P_D	490	mW
Junction Temperature	T_j	150	°C
Operating Temperature	T_{opr}	−40~85	°C
Storage Temperature	T_{stg}	−55~150	°C

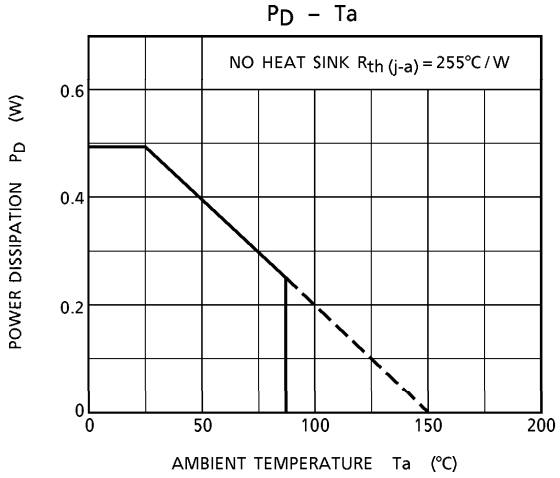
(Note 1) T = 10ms MAX. and maximum duty is less than 30%.
(Note 2) T = 10ms single pulse

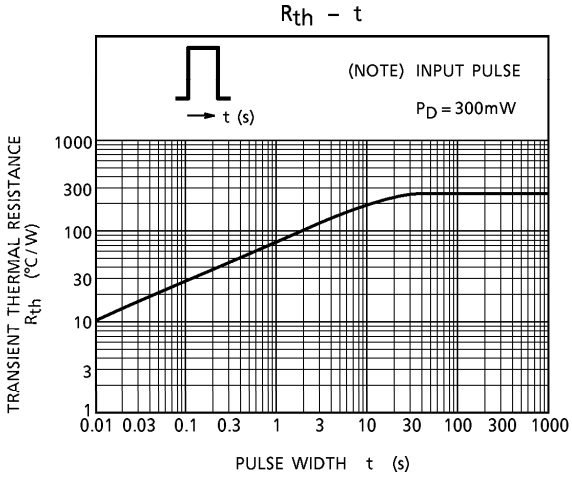
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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









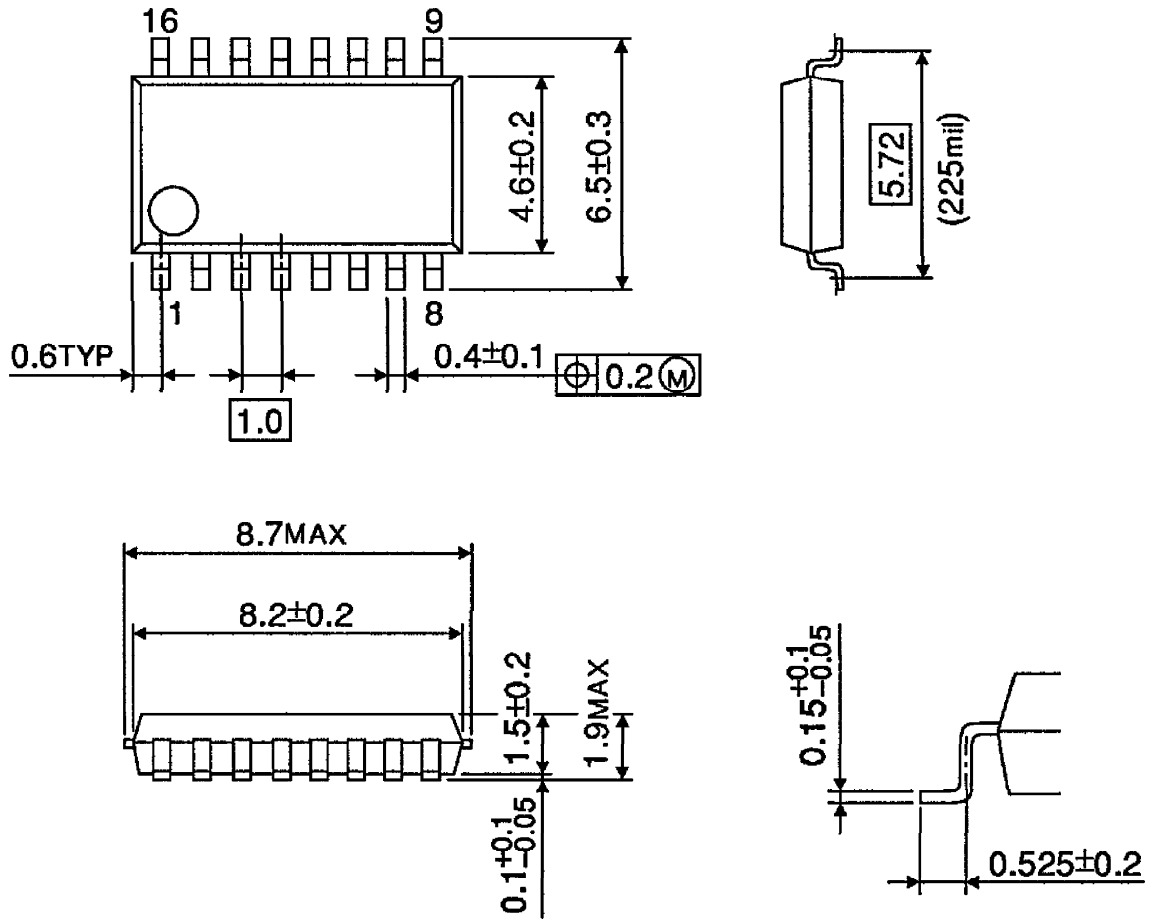
PRECAUTIONS for USING

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.)