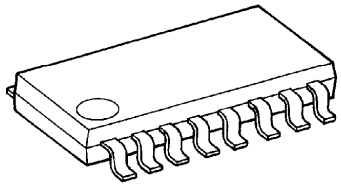
TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

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.



SSOP16-P-225-1.00A

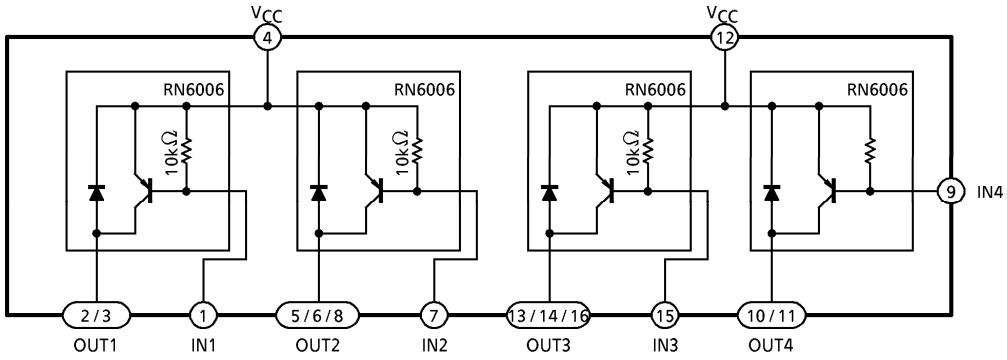
Weight : 0.14g (Typ.)

FEATURES

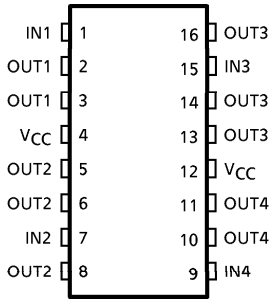
- Suitable for Motor drive circuit and LED display module
- Bias Resistor and Diodes are equipped : R = 10kΩ
- Low Saturation Voltage

  $V_{CE\ (sat)}$ = 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

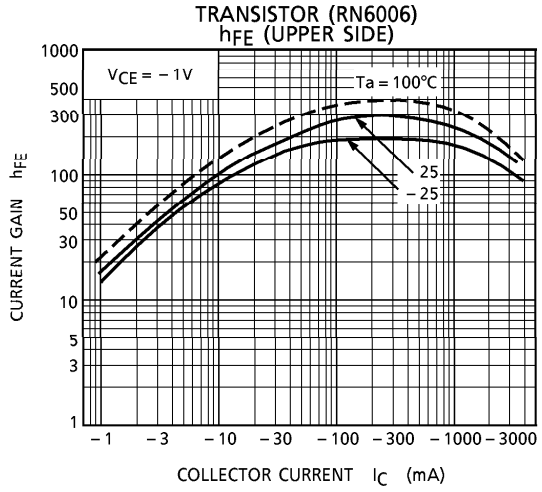
MAXIMUM RATINGS (Ta = 25°C)

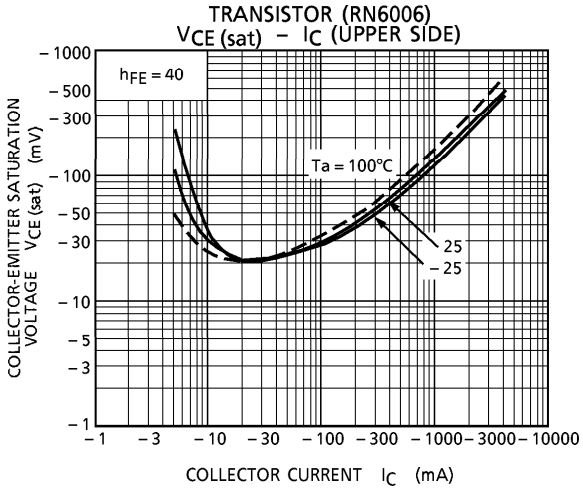
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	− 10	V
Breakdown Voltage	V_{CBO}	− 10	V
	V_{CER}	− 10	
	V_{EBO}	− 6	
Output Current	I_O	− 2	A / ch
	$I_{O\ (PEAK)}$	(Note 1) − 4	
Base Current	$I_{B\ (AVE)}$	− 0.4	A
	$I_{B\ (PEAK)}$	− 0.8	
Fly-wheeling Diode Forward Current	I_F	(Note 2) − 2	A
Power 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

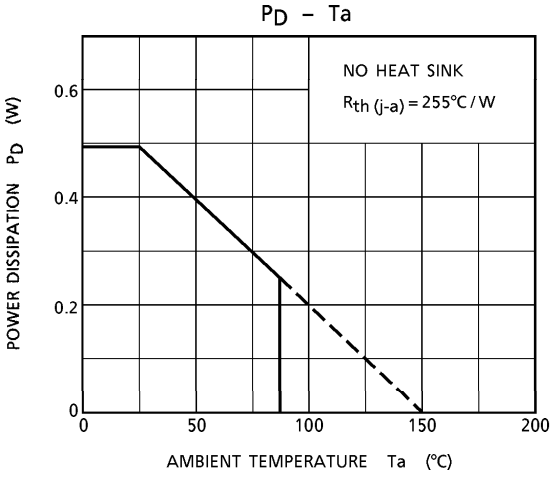
(Note 1) T = 10ms MAX. and maximum duty is less than 30%.
(Note 2) T = 10ms single pulse

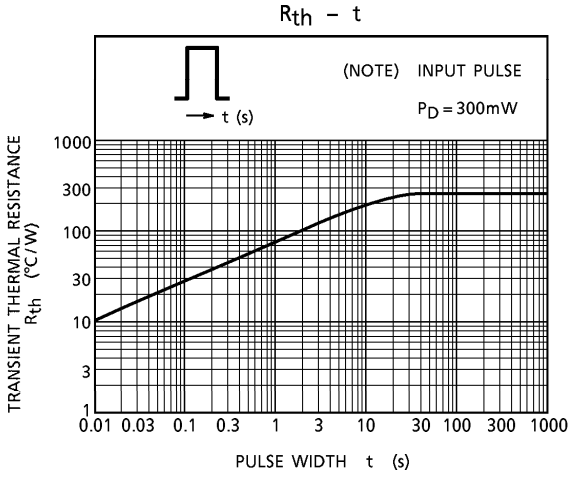
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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	—	− 0.13	− 0.25	V
			I_C = 2A, I_B = − 50mA	—	− 0.25	− 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 Voltage	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









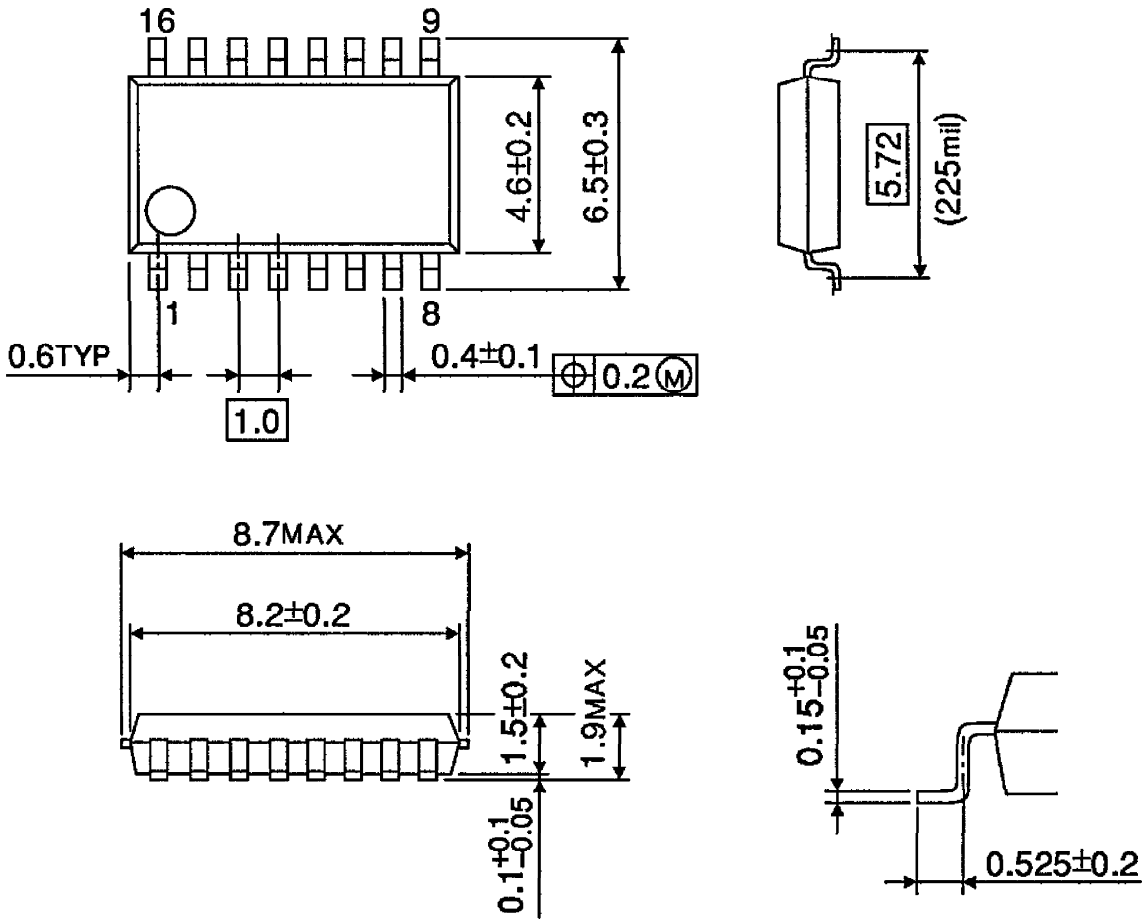
PRECAUTIONS for USING

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.)