

TD62M3701F

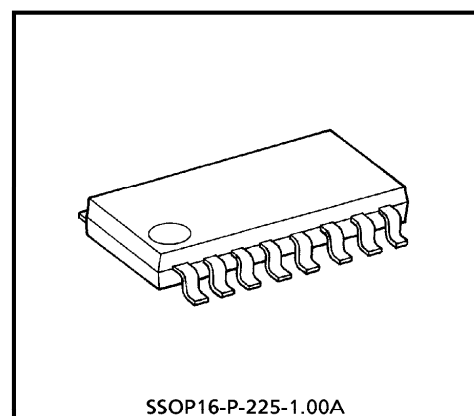
LOW SATURATION VOLTAGE DRIVER FOR MOTOR

TD62M3701F is Multi Chip IC incorporates 6 low saturation discrete transistors which equipped bias resistor and fly-wheel diode.

This IC is suitable for a battery use motor drive applications.

FEATURES

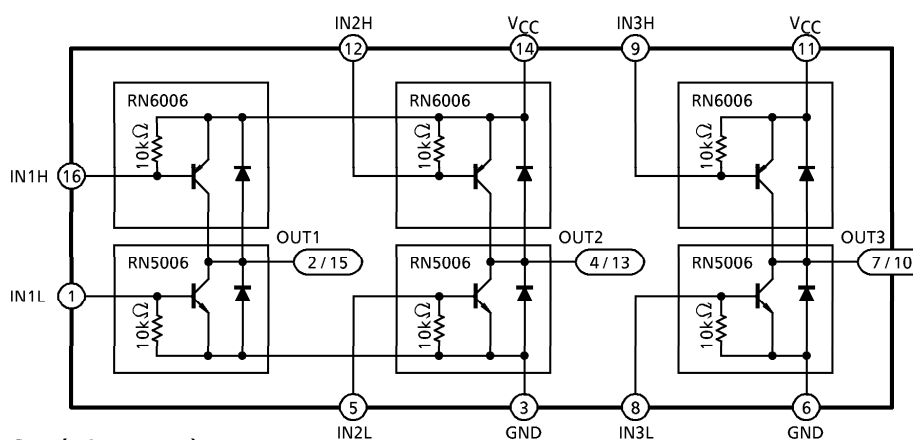
- Suitable for high efficiency motor drive circuit
- Built-in fly-wheel diode
- Built-in bias resistor : $R = 10k\Omega$ (Typ.)
- SSOP16 1mm pitch small package sealed
- Low saturation voltage
 $V_{CE(sat)} = 0.29V$ (Typ.) at $I_O = 1A$
 $V_{CE(sat)} = 0.53V$ (Typ.) at $I_O = 2A$
 (Upper and lower side total)



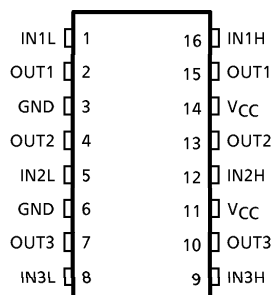
SSOP16-P-225-1.00A

Weight : 0.14g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



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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 _{CEO}	10	
	V _{EBO}	6	
	V _{BO}	6	
Output Current	I _O	2	A
	I _O (PEAK)	4 (Note 1)	
Base Current	I _B	±0.4	A
	I _B (PEAK)	±0.8 (Note 1)	
Diode Forward Current	I _F	2 (Note 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%.

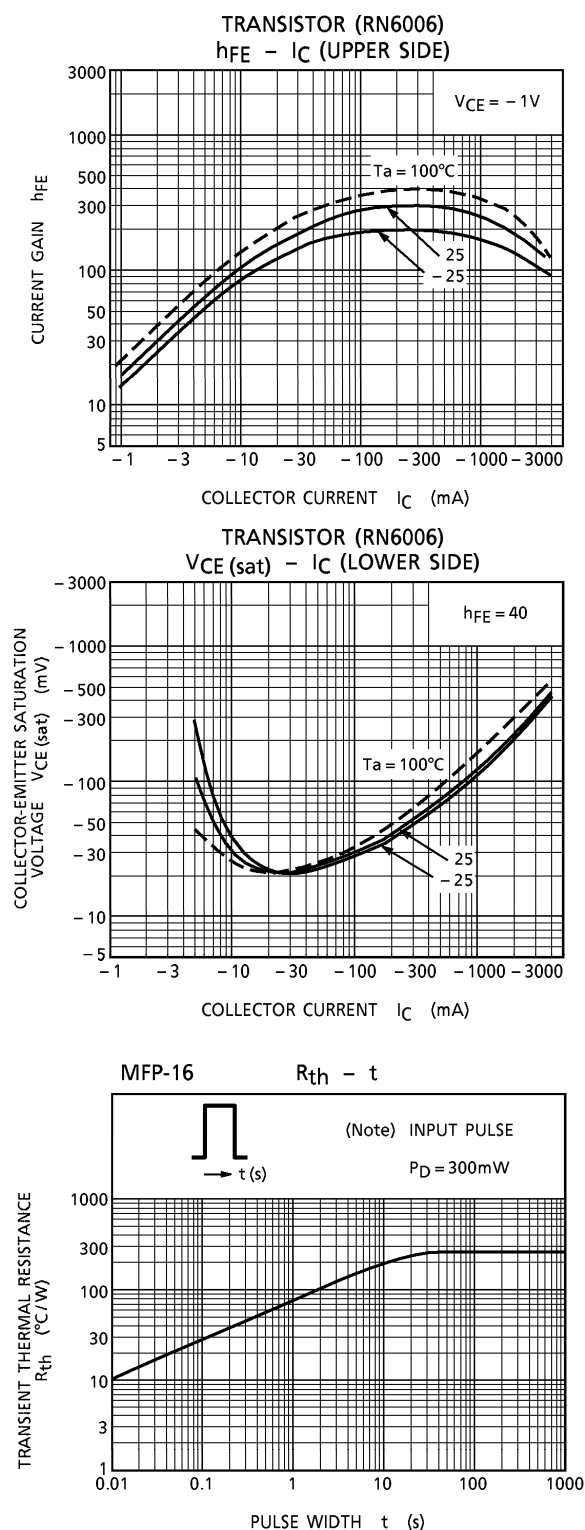
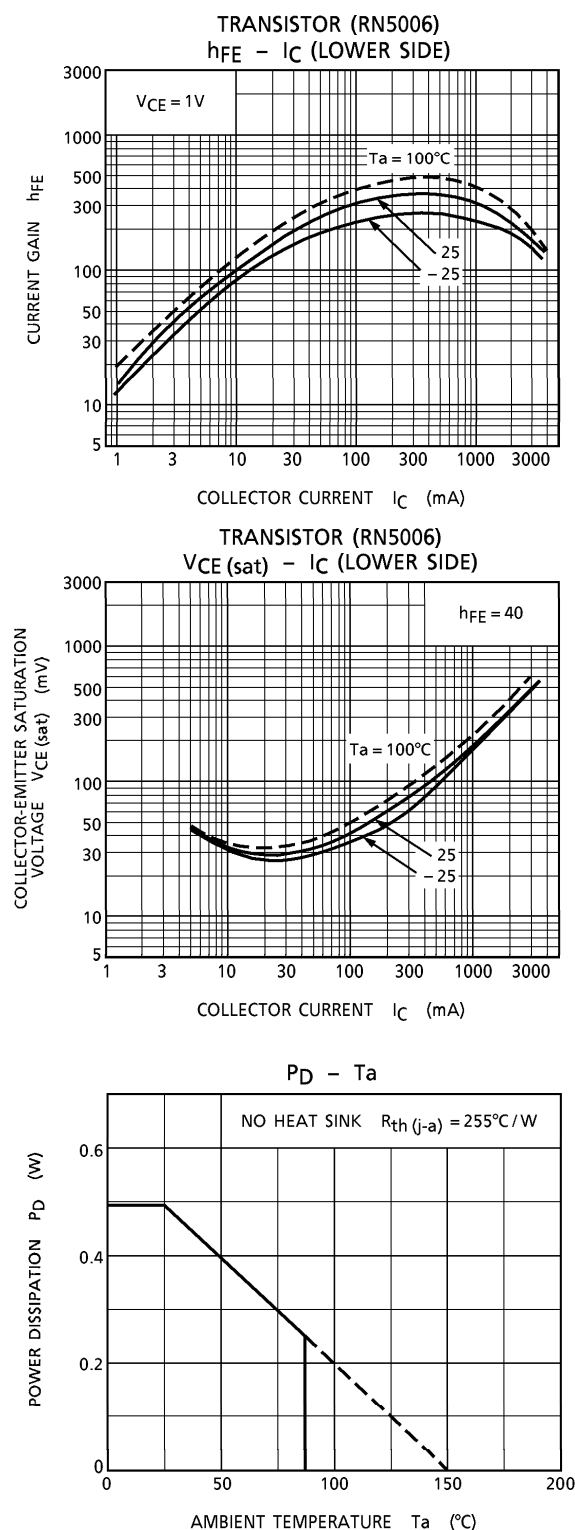
(Note 2) T = 10ms single pulse

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 = 2.0A	60	130	—	
Saturation Voltage	Upper Side	V _{CE} (sat)	—	I _C = - 1A, I _B = - 25mA	—	- 0.16	- 0.22	V
				I _C = - 2A, I _B = - 50mA	—	- 0.28	- 0.45	
	Lower Side			I _C = 1A, I _B = 25mA	—	0.13	0.22	
				I _C = 2A, I _B = 50mA	—	0.25	0.45	
	Summing Total			I _C = 1A, I _B = 25mA	—	0.29	0.42	
				I _C = 2A, I _B = 50mA	—	0.53	0.85	
Transition Frequency		f _T	—	V _{CE} = 2V, I _C = 0.5A	—	150	—	MHz
Leakage Current	Upper Side	I _{OL}	—	V _{CC} = - 10V	—	0	- 5	μA
	Lower Side			V _{CC} = 10V	—	0	5	
Diode Forward Voltage	Upper Side	V _F	—	I _F = 300mA	—	0.89	1.2	V
				I _F = 450mA 10ms pulse	—	1.60	—	
	Lower Side			I _F = 300mA	—	0.89	1.2	
				I _F = 450mA 10ms pulse	—	1.60	—	
Base-Emitter Resistor		R _{BE}	—	—	7	10	13	kΩ
Base-Emitter Forward Voltage		V _{BE} (PNP)	—	V _{CE} = - 1V, I _C = - 2A	—	- 0.84	- 1.5	V
		V _{BE} (NPN)	—	V _{CE} = 1V, I _C = 2A	—	0.84	1.5	

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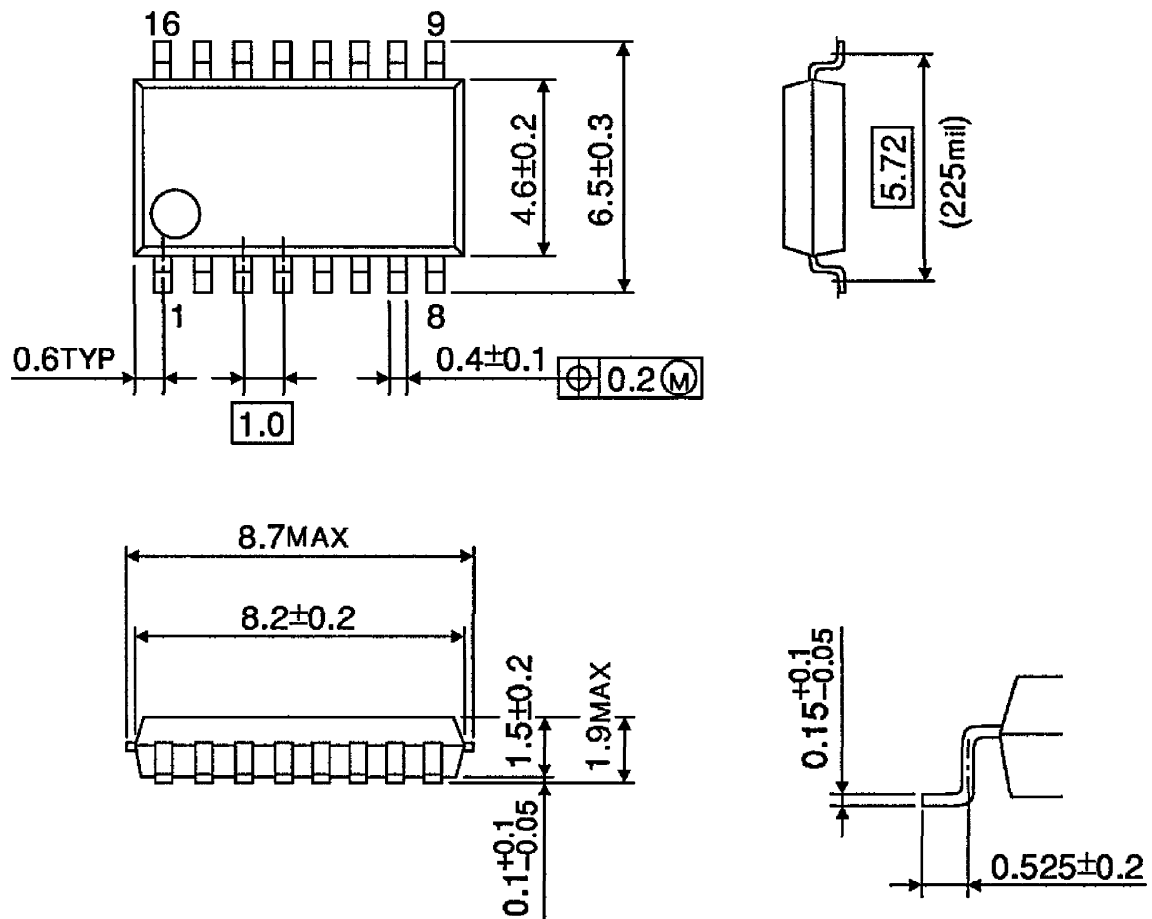
PRECAUTIONS for USING

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.)