

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

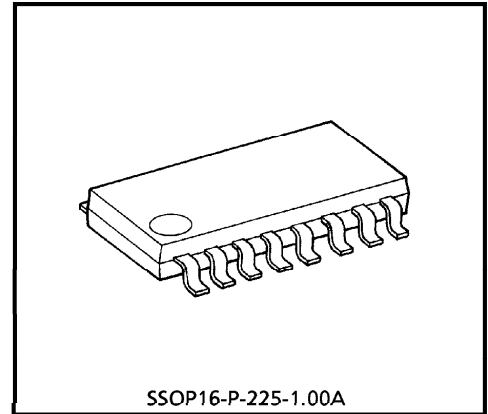
TD62M3700F

3 PHASE FULL-WAVE INVERTER

TD62M3700F is low saturation, high current 3 phase full-wave type inverter IC designed especially for battery use motor drive applications.

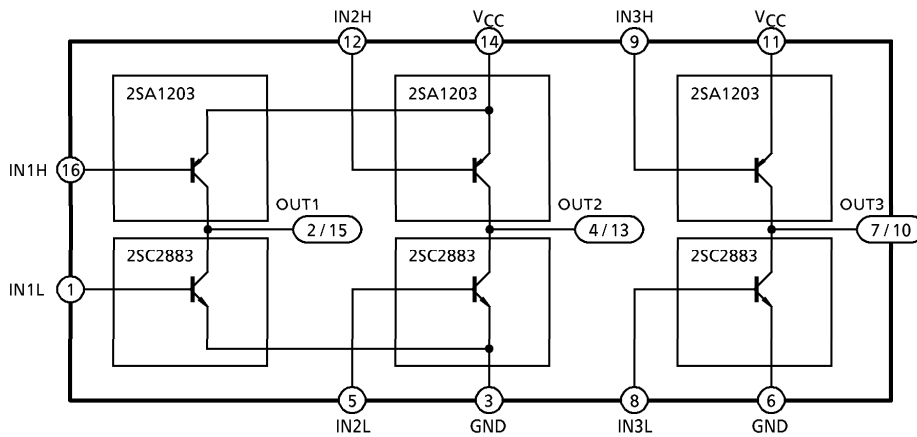
FEATURES

- High current : $I_O (AVE) = 1.5A$
 $I_O (PEAK) = 3.0A$
- Sealed in 1mm pitch 16pin surface mount package (SSOP16)

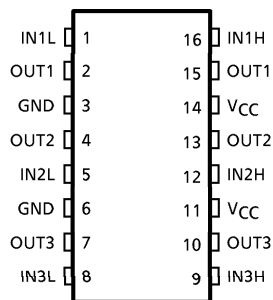


Weight : 0.14g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



961001EBA2

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MAXIMUM RATINGS (Ta = 25°C)

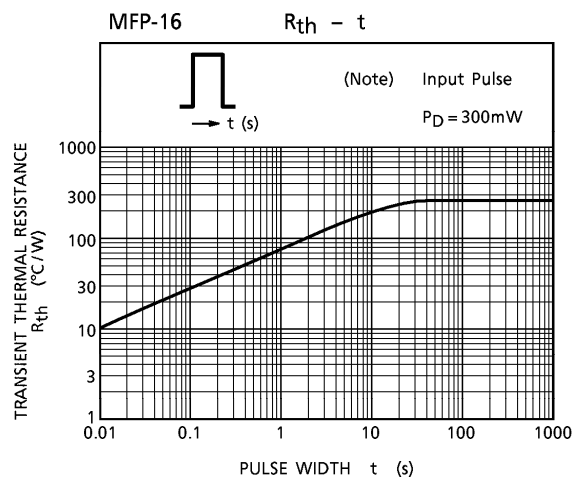
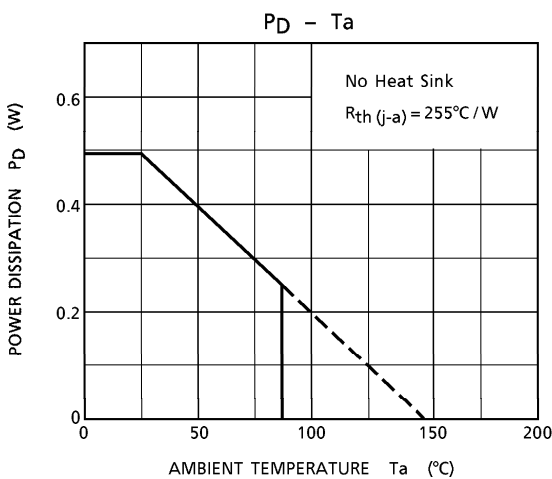
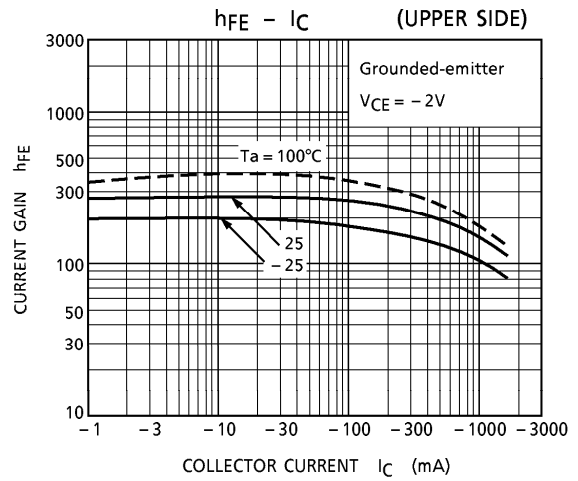
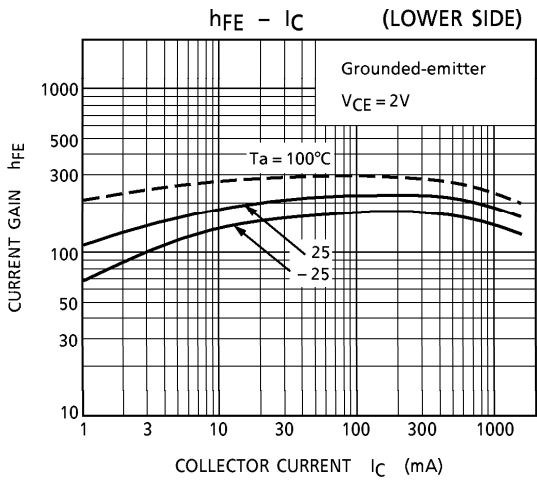
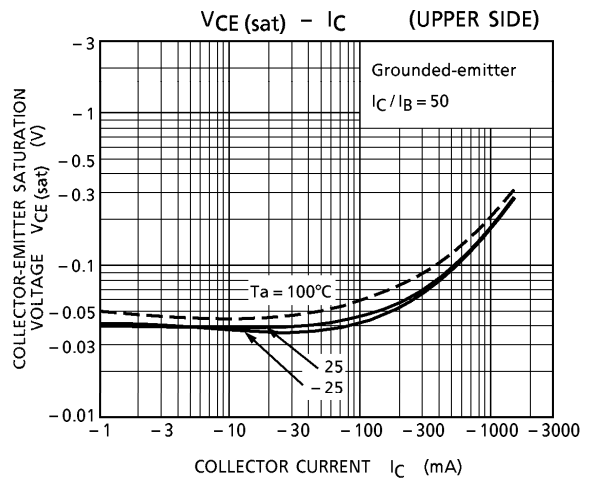
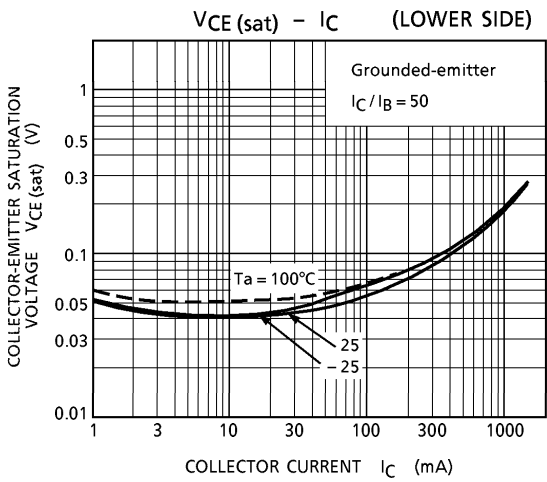
CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V _{CC}	30	V
Breakdown Voltage	V _{CB0}	30	V
	V _{CEO}	30	
	V _{EB0}	5	
Output Current (Average)	I _O (AVE)	1.5	A
Output Current (Peak)	I _O (PEAK)	3.0 (Note 1)	A
Base Current	I _B	± 0.3	A
Power Dissipation	P _D	490 (Note 2)	mW
Junction Temperature	T _j	150	°C
Operating Temperature	T _{opr}	- 40~85	°C
Storage Temperature	T _{stg}	- 55~150	°C

(Note 1) T = 10ms single pulse

(Note 2) Free Air

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Current Gain		h _{FE} (1)	—	V _{CE} = - 2V, I _C = - 0.5A	160	—	320	—
		h _{FE} (2)	—	V _{CE} = 0.4V, I _C = 0.2A	160	—	600	
h _{FE} Ratio		h _{FE} (1) / h _{FE} (2)	—	V _{CE} = 0.4V, I _C = 30mA / V _{CE} = 0.4V, I _C = 0.2A	0.75	—	1.25	—
Saturation Voltage	Upper Side	V _{CE} (sat)	—	I _C = - 0.5A, I _B = - 5.0mA	—	- 0.35	- 0.50	V
				I _C = - 1.5A, I _B = - 30mA	—	—	- 2.0	
	Lower Side			I _C = 0.5A, I _B = 5.0mA	—	0.2	0.35	
				I _C = 1.5A, I _B = 30mA	—	—	2.0	
				Summing Total	I _C = 0.5A, I _B = 5.0mA	—	0.55	
I _C = 1.5A, I _B = 30mA	—	—	4.0					
Transition Frequency		f _T	—	V _{CE} = 2V, I _C = 0.5A	—	120	—	MHz
Leakage Current	Upper Side	I _{OL}	—	V _{CC} = - 30V	—	0	- 5	μA
	Lower Side			V _{CC} = 30V	—	0	5	
Base-Emitter Forward Voltage	Upper Side	V _{BE} (PNP)	—	V _{CE} = - 1V, I _C = - 2A	—	- 0.84	- 1.5	V
	Lower Side	V _{BE} (NPN)	—	V _{CE} = 1V, I _C = 2A	—	0.84	1.5	

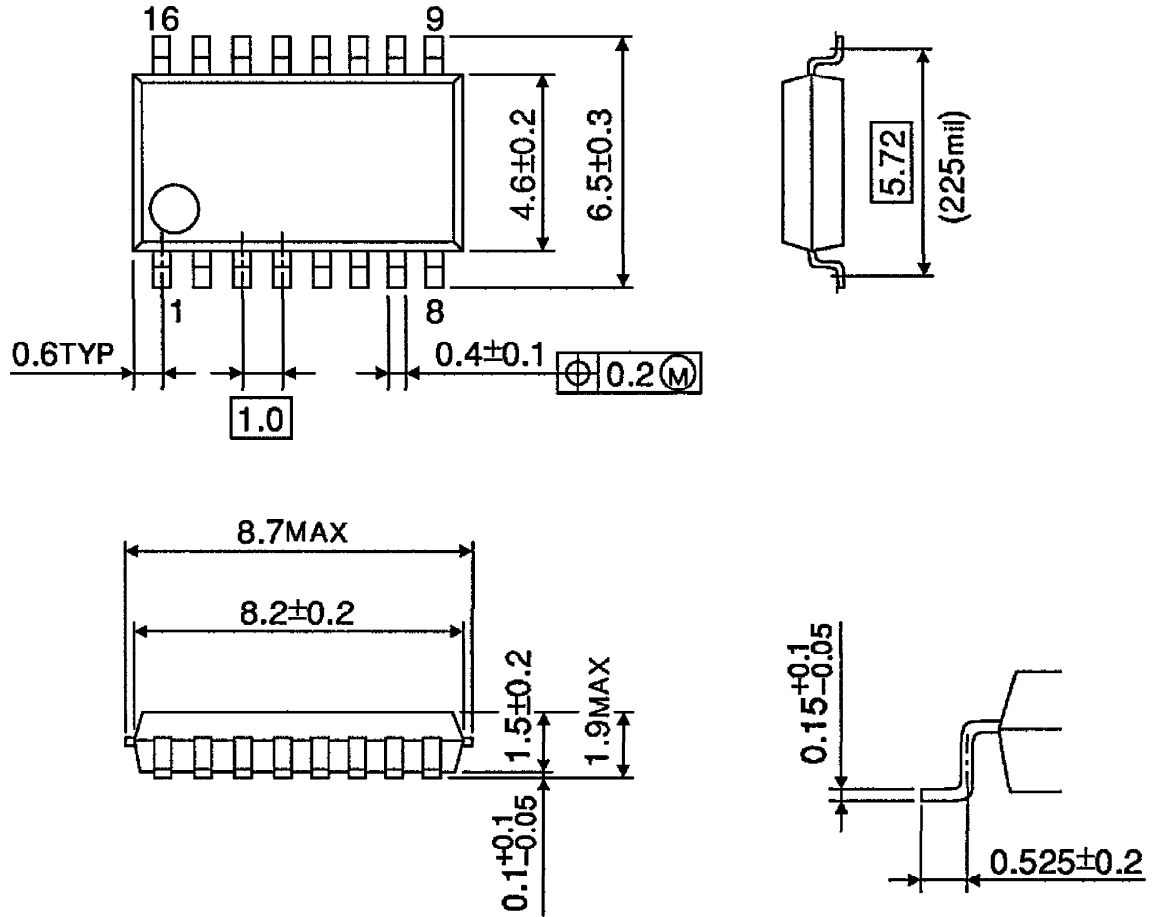


PRECAUTIONS for USING

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.)