

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI CHIP

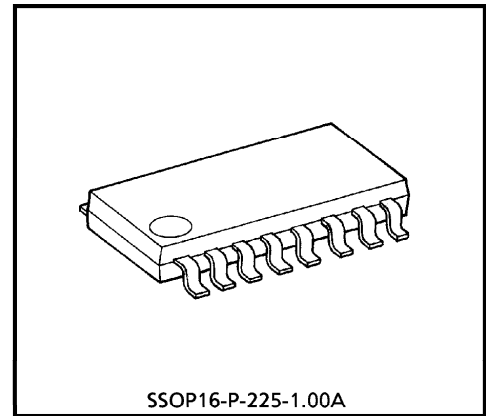
TD62M3702F

LOW SATURATION VOLTAGE DRIVER FOR MOTOR

TD62M3702F is Multi Chip IC incorporates 6 low saturation discrete transistors. This IC is suitable for a battery use motor drive applications.

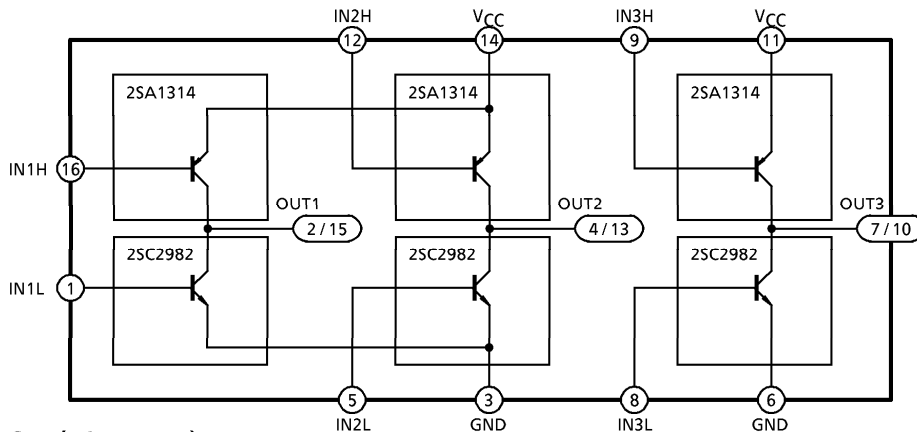
FEATURES

- Suitable for High Efficiency Motor drive circuit
- External Input Resistor
- SSOP16 1mm pitch small package sealed
- Low Saturation Voltage
 - : $V_{CE(sat)} = 0.20V$ (Typ.) at $I_O = 1A$
 - $V_{CE(sat)} = 0.40V$ (Typ.) at $I_O = 2A$
 - (Upper and Lower side total)

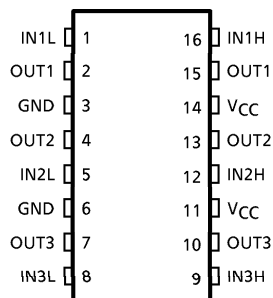


Weight : 0.14g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



961001EBA2

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MAXIMUM RATINGS (Ta = 25°C)

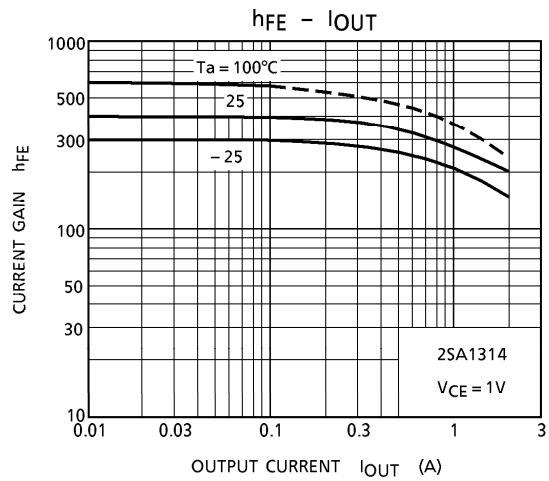
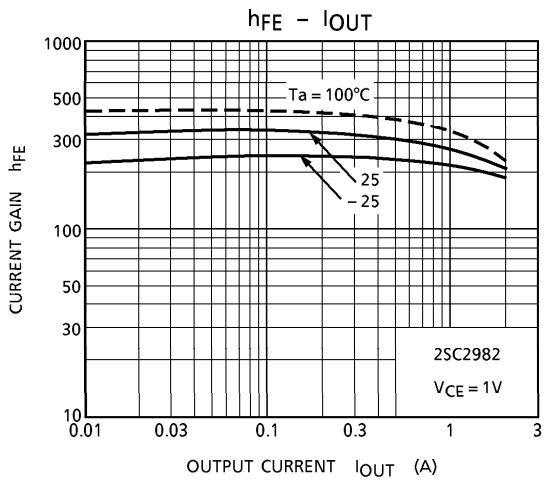
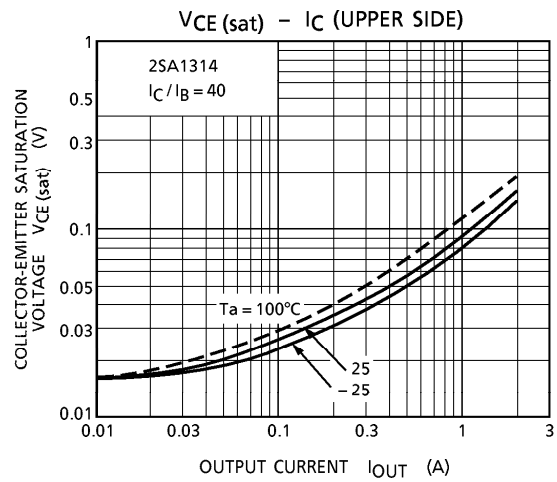
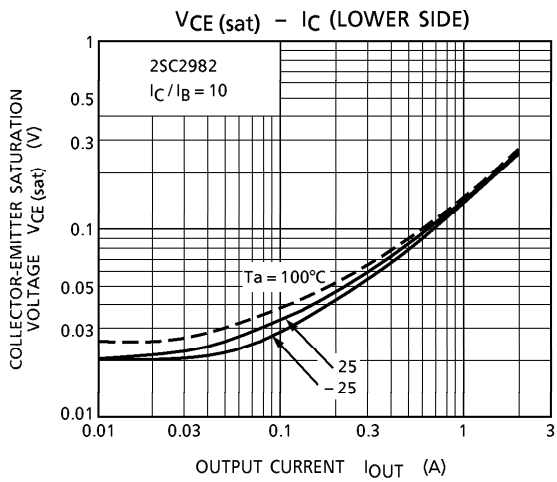
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	15	V
Breakdown Voltage	V _{CB0}	15	V
	V _{CEO}	15	
	V _{BEO}	6	
Output Current	I _O (AVE)	2	A
	I _O (PEAK)	4 (Note 1)	
Base Current	I _B	0.4	A
Power Dissipation	P _D	700 (Note 2)	mW
Junction Temperature	T _j	150	°C
Operating Temperature	T _{opr}	-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} = 0.4V, I _C = 30mA	160	—	600	—
	h _{FE} (2)	—	V _{CE} = 0.4V, I _C = 0.2A	160	—	600	
Current Gain 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	V _{CE} (sat) (Upper side)	—	I _C = -1A, I _B = -25mA	—	-0.1	-0.25	V
			I _C = -2A, I _B = -50mA	—	-0.2	-0.50	
	V _{CE} (sat) (Lower side)	—	I _C = 1A, I _B = 25mA	—	0.1	0.30	
			I _C = 2A, I _B = 50mA	—	0.2	0.50	
V _{CE} (sat) (Summing Total)	—	I _C = 1A, I _B = 25mA	—	0.2	0.55		
		I _C = 2A, I _B = 50mA	—	0.4	1.0		
Transition Frequency	f _T	—	V _{CE} = 2V, I _C = 0.5A	—	140	—	MHz
Leakage Current	I _{OL}	(Upper side)	V _{CC} = -15V	—	0	-10	μA
		(Lower side)	V _{CC} = 15V	—	0	10	
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	

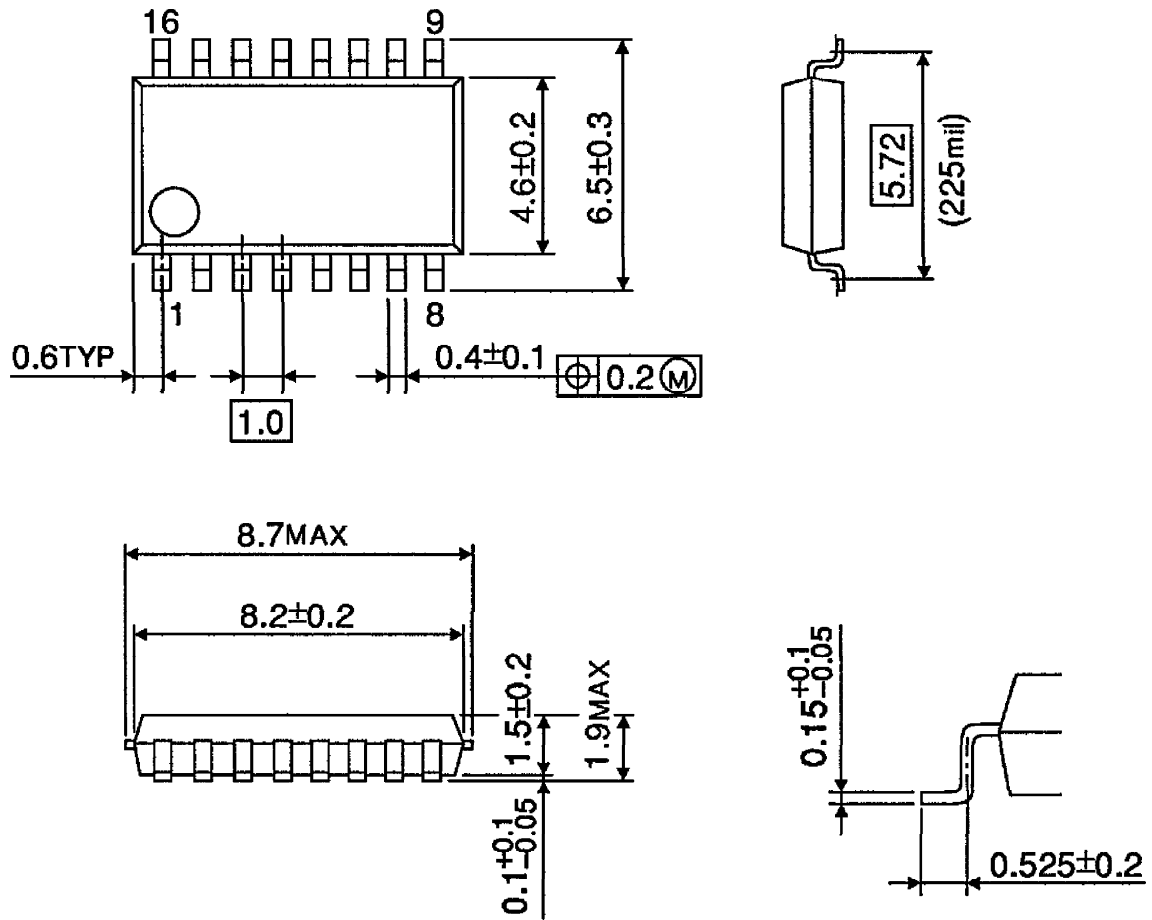


PRECAUTIONS for USING

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.)