

# TA8303F

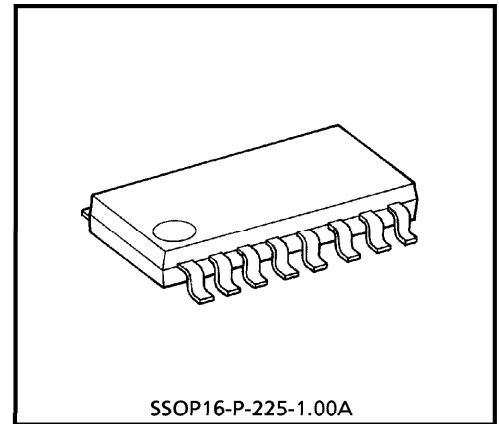
## MOTOR DRIVER FOR CAMERA

TA8303F is Multi Chip IC incorporates 6 low saturation discrete transistors which equipped Bias resistor and Free-Wheeling diode.

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

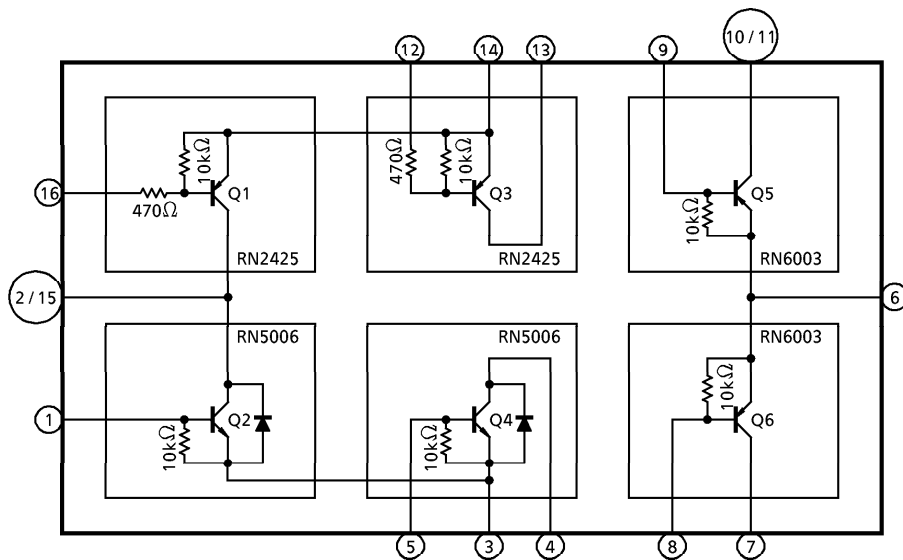
### FEATURES

- Suitable for high efficiency motor drive circuit.
- Built-in Bias Resistor : R = 10kΩ
- Built-in Free-Wheeling Diode : Only lower side
- Small package sealed : SSOP16
- Low saturation voltage



Weight : 0.14g (Typ.)

### BLOCK DIAGRAM



## FUNCTION DESCRIPTION ON EACH TERMINAL

PIN No.	FUNCTION	
1	Tr. Q2	Input Terminal
2	Tr. Q1, Q2	Output Terminal
3	Tr. Q2, Q4	GND
4	Tr. Q4	Output Terminal
5	Tr. Q4	Input Terminal
6	Tr. Q5, Q6	Supply Voltage
7	Tr. Q6	Output Terminal
8	Tr. Q6	Input Terminal
9	Tr. Q5	Input Terminal
10	Tr. Q5	Output Terminal
11	Tr. Q5	Output Terminal
12	Tr. Q3	Input Terminal
13	Tr. Q3	Output Terminal
14	Tr. Q1, Q3	Supply Voltage
15	Tr. Q1, Q2	Output Terminal
16	Tr. Q1	Input Terminal

## MAXIMUM RATINGS (Ta = 25°C)

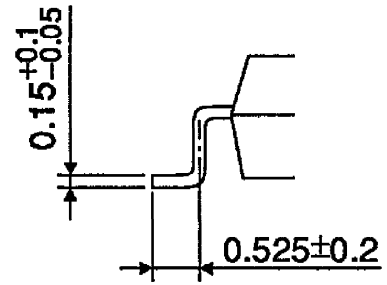
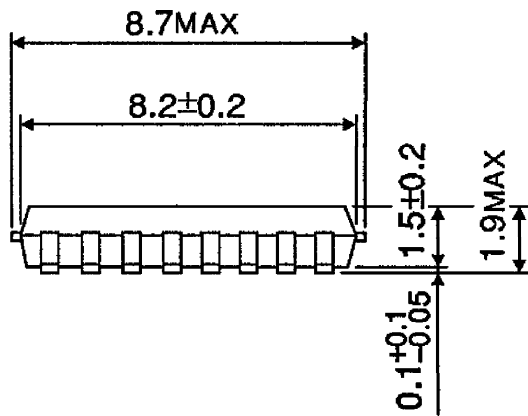
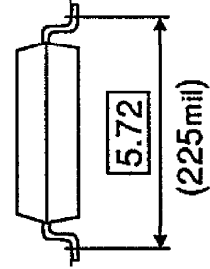
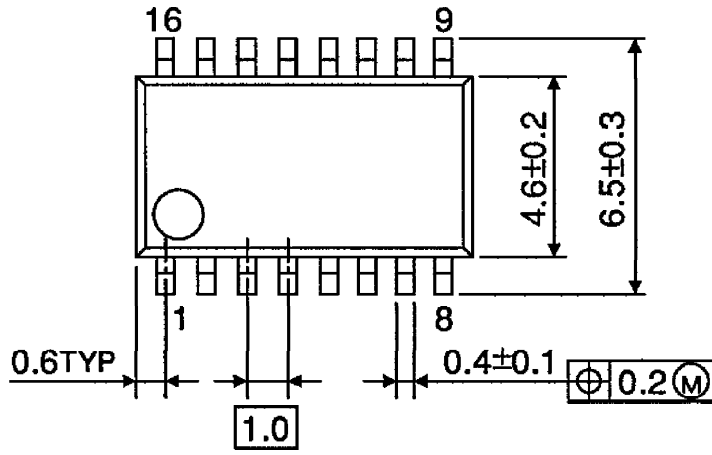
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	7.0	V
Breakdown Voltage	V <sub>CB0</sub>	7.0	V
	V <sub>CEO</sub>	7.0	V
	V <sub>EBO</sub>	5.0	V
Output Current	I <sub>OUT</sub>	0.8	A
Base Current	I <sub>B</sub>	0.4	A
Power Dissipation	P <sub>D</sub>	490	mW
Junction Temperature	T <sub>j</sub>	150	°C
Operating Temperature	T <sub>opr</sub>	-20~60	°C
Storage Temperature	T <sub>stg</sub>	-55~150	°C

## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	MEASURING Tr	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Current Gain	h <sub>FE</sub> 1	RN6003	—	V <sub>CE</sub> = -2V, I <sub>C</sub> = -500mA	100	—	400	
	h <sub>FE</sub> 2	RN2425	—	V <sub>CE</sub> = -1V, I <sub>C</sub> = -100mA	100	—	—	
	h <sub>FE</sub> 3	RN5006	—	V <sub>CE</sub> = 1V, I <sub>C</sub> = 500mA	160	—	600	
Saturation Voltage	V <sub>CE</sub> 1	RN6003	—	I <sub>C</sub> = -500mA, I <sub>B</sub> = -50mA	-0.5	—	—	V
	V <sub>CE</sub> 2	RN2425	—	I <sub>C</sub> = -50mA, I <sub>B</sub> = -1mA	-0.25	—	—	V
	V <sub>CE</sub> 3	RN5006	—	I <sub>C</sub> = 600mA, I <sub>B</sub> = 20mA	—	—	0.5	V
Leakage Current	I <sub>OFF</sub>		—	V <sub>CC</sub> = 7V	—	—	1.0	μA
Input Resistance	R <sub>1</sub>	RN6003	—		7	10	13	kΩ
	R <sub>2</sub>	RN2425	—		0.329	0.47	0.61	kΩ
Resistance Ratio	R'	RN2425	—		0.042	—	0.051	
Diode Forward Voltage	V <sub>F</sub>	RN5006	—	I <sub>F</sub> = 300mA	—	0.89	1.2	V
Transition Frequency	f <sub>T1</sub>	RN6003	—	V <sub>CE</sub> = -2V, I <sub>C</sub> = -500mA	—	—	120	MHz
	f <sub>T2</sub>	RN2425	—	V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA	—	—	200	MHz
	f <sub>T3</sub>	RN5006	—	V <sub>CE</sub> = 1V, I <sub>C</sub> = 500mA	—	—	140	MHz

**PACKAGE DIMENSIONS**  
SSOP16-P-225-1.00A

Unit : mm



Weight : 0.14g (Typ.)

**RESTRICTIONS ON PRODUCT USE**

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