

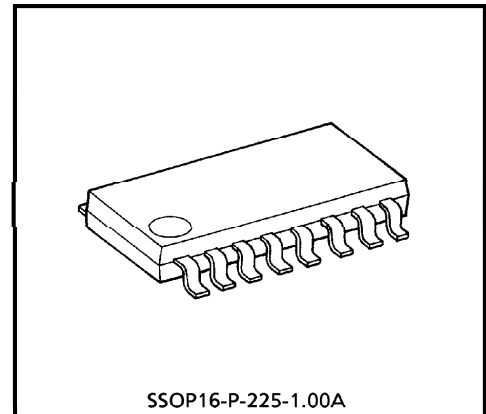
# TA8304F

## MOTOR DRIVER FOR CAMERA

TA8304F is Multi Chip IC incorporates 6 low saturation discrete transistors which equipped bias resistor. This IC is suitable for a camera use motor drive applications.

### FEATURES

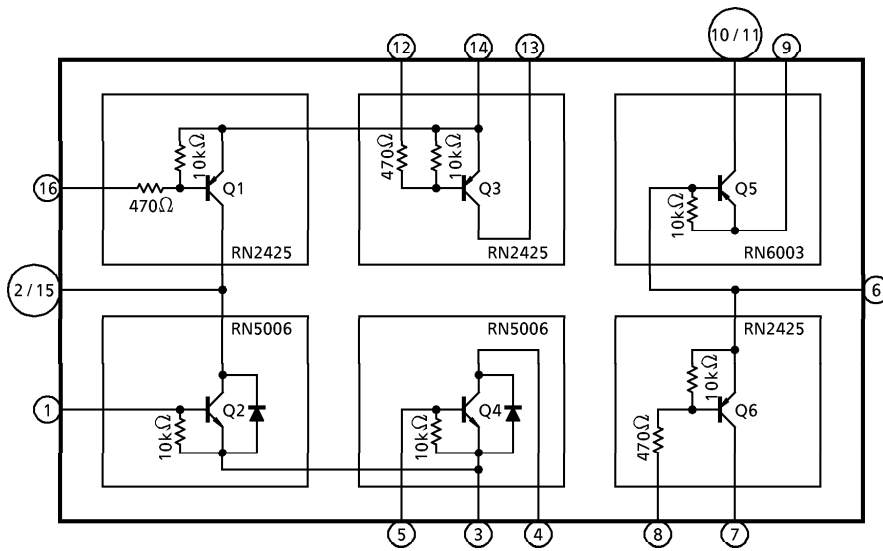
- Suitable for high efficiency motor drive circuit.
- Built-in Bias Resistor :  $R = 10k\Omega$
- Small package sealed : SSOP16
- Low saturation voltage
- H-bridge



SSOP16-P-225-1.00A

Weight : 0.14g (Typ.)

### BLOCK DIAGRAM



980910EBA2

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## FUNCTION DESCRIPTION ON EACH TERMINAL

| PIN No. | FUNCTION                   |
|---------|----------------------------|
| 1       | Tr. Q2 Input Terminal      |
| 2       | Tr. Q1, Q2 Output Terminal |
| 3       | Tr. Q1, Q4 GND             |
| 4       | Tr. Q4 Output Terminal     |
| 5       | Tr. Q4 Input Terminal      |
| 6       | Tr. Q6 Supply Voltage      |
| 7       | Tr. Q6 Output Terminal     |
| 8       | Tr. Q6 Input Terminal      |
| 9       | Tr. Q5 Supply Voltage      |
| 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, Q3 Supply Voltage  |
| 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>CBO</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   |

980910EBA2'

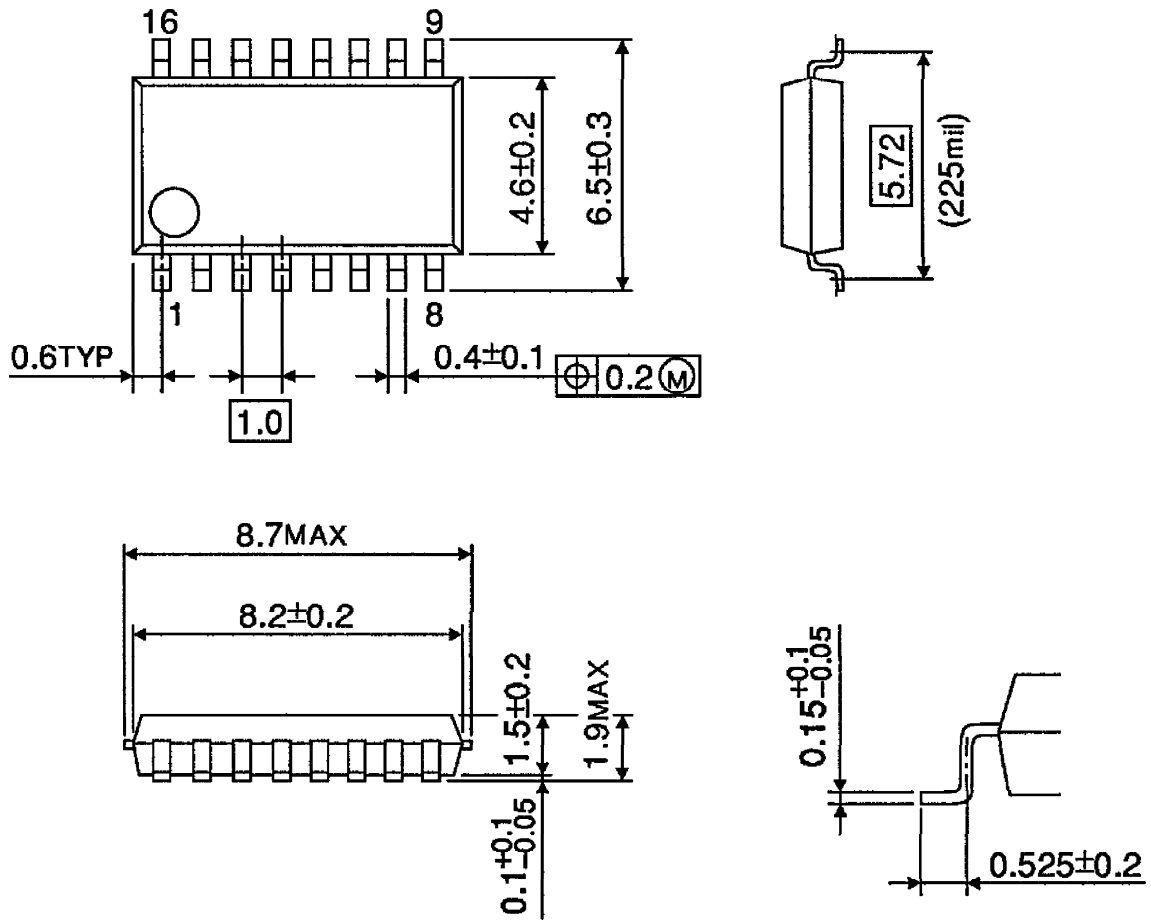
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## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC           | SYMBOL            | MEASURING<br>Tr | TEST<br>CIR-<br>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<br>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<br>Voltage | V <sub>F</sub>    | RN5006          | —                    | I <sub>F</sub> = 300mA                          | —     | —    | 1.2   | V    |
| Transition<br>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  |

**OUTLINE DRAWING**  
SSOP16-P-225-1.00A

Unit : mm



Weight : 0.14g (Typ.)