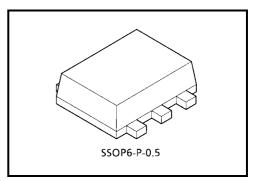
TOSHIBA Bipolar Linear Integrated Circuit Silicon Monolithic

# **TA4014FE**

#### TA4014FE Use for Crystal Oscillators

#### **Features**

- Bias resistors, a transistor for oscillation and a transistor for buffer are packed in one package; hence, TA4014FE can easily compose a crystal oscillator.
- TA4014FE comes with a 6-pin thin ultra-compact package (1.6 mm × 1.6 mm) and is suitable for super-high density mounting.



Weight: 0.003 g (typ.)

#### Maximum Ratings (Ta = 25°C)

| Characteristics         | Symbol           | Rating  | Unit   |
|-------------------------|------------------|---------|--------|
| Power supply voltage    | V <sub>CC</sub>  | 6       | V      |
| Circuit current         | Icc              | 8       | mA     |
| Total power dissipation | PD               | 100     | mW     |
|                         | (Note)           | 100     | (Note) |
| Junction temperature    | Tj               | 125     | °C     |
| Storage temperature     | T <sub>stg</sub> | -55~125 | °C     |

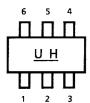
Note: When mounted on the glass epoxy board of  $2.5 \text{ cm}^2 \times 1.6 \text{ t.}$ 

#### **Electrical Characteristics (Ta = 25°C)**

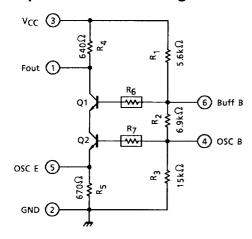
| Characteristics            | Symbol            | Test<br>Circuit | Test Condition          | Min  | Тур. | Max  | Unit |
|----------------------------|-------------------|-----------------|-------------------------|------|------|------|------|
| Circuit current            | Icc               |                 | V <sub>CC</sub> = 3.0 V | 1.08 | 1.27 | 1.52 | mA   |
| Oscillator base voltage    | Voscb             | _               | V <sub>CC</sub> = 3.0 V | 1.34 | 1.51 | 1.67 | V    |
| Oscillator emitter voltage | Vosce             |                 | V <sub>CC</sub> = 3.0 V | 0.69 | 0.79 | 0.88 | V    |
| Buffer base voltage        | $V_{BuffB}$       |                 | V <sub>CC</sub> = 3.0 V | 2.05 | 2.29 | 2.53 | V    |
| Fout voltage               | V <sub>Fout</sub> |                 | V <sub>CC</sub> = 3.0 V | 2.03 | 2.26 | 2.52 | V    |

| Characteristics | Symbol         | Тур. | Unit |
|-----------------|----------------|------|------|
| R1 resistance   | R <sub>1</sub> | 5.6  | kΩ   |
| R2 resistance   | R <sub>2</sub> | 6.9  | kΩ   |
| R3 resistance   | R <sub>3</sub> | 15   | kΩ   |
| R4 resistance   | R <sub>4</sub> | 640  | Ω    |
| R5 resistance   | R <sub>5</sub> | 670  | Ω    |

## Marking



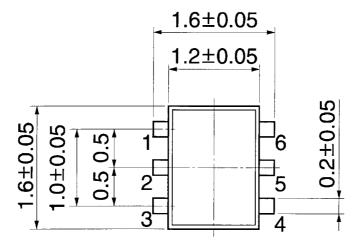
# **Equivalent Circuit Diagram**

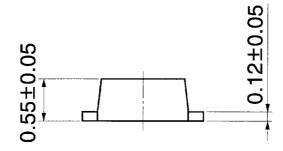


2

## **Package Dimensions**

SSOP6-P-0.5 Unit: mm





Weight: 0.003 g (typ.)

3 2003-03-24

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4

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