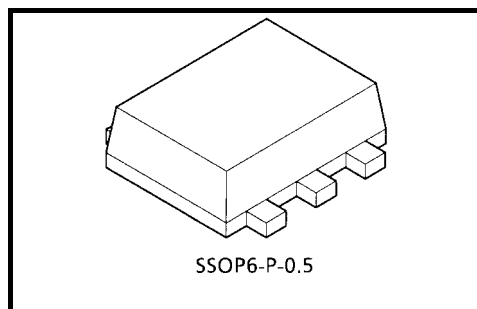


# TA4015FE

## TA4015FE Use for Crystal Oscillators

### Features

- Bias resistors, a transistor for oscillation and a transistor for buffer are packed in one package; hence, TA4015FE can easily compose a crystal oscillator.
- TA4015FE comes with a 6-pin thin ultra-compact package and is suitable for super-high density mounting.



Weight: 0.003 g (typ.)

### Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Power supply voltage	V <sub>CC</sub>	6	V
Circuit current	I <sub>CC</sub>	9	mA
Total power dissipation	P <sub>D</sub>	100	mW
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55~125	°C

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings and the operating ranges.

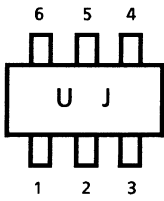
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

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

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Circuit current	I <sub>CC</sub>	—	V <sub>CC</sub> = 3.0 V	1.10	1.32	1.52	mA
Oscillator base voltage	V <sub>OscB</sub>	—	V <sub>CC</sub> = 3.0 V	1.65	1.71	1.79	V
Oscillator emitter voltage	V <sub>OscE</sub>	—	V <sub>CC</sub> = 3.0 V	0.92	0.99	1.06	V
Buffer base voltage	V <sub>BuffB</sub>	—	V <sub>CC</sub> = 3.0 V	2.20	2.28	2.36	V
Fout voltage	V <sub>Fout</sub>	—	V <sub>CC</sub> = 3.0 V	1.95	2.02	2.10	V

Characteristics	Symbol	Typ.	Unit
R1 resistance	R <sub>1</sub>	7.5	kΩ
R2 resistance	R <sub>2</sub>	6.8	kΩ
R3 resistance	R <sub>3</sub>	24	kΩ
R4 resistance	R <sub>4</sub>	820	Ω
R5 resistance	R <sub>5</sub>	820	Ω

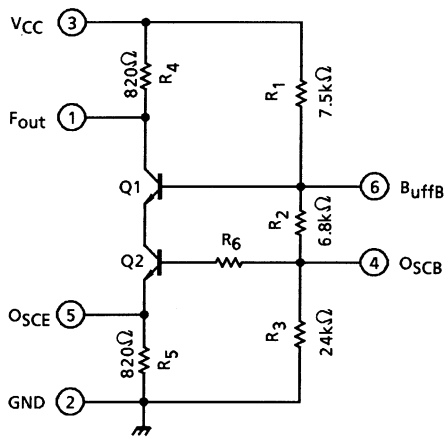
**Marking**



**Caution**

Because of this product structure, when handling this product, please be sure to protect work desk, human body and soldering irons from electrostatics.

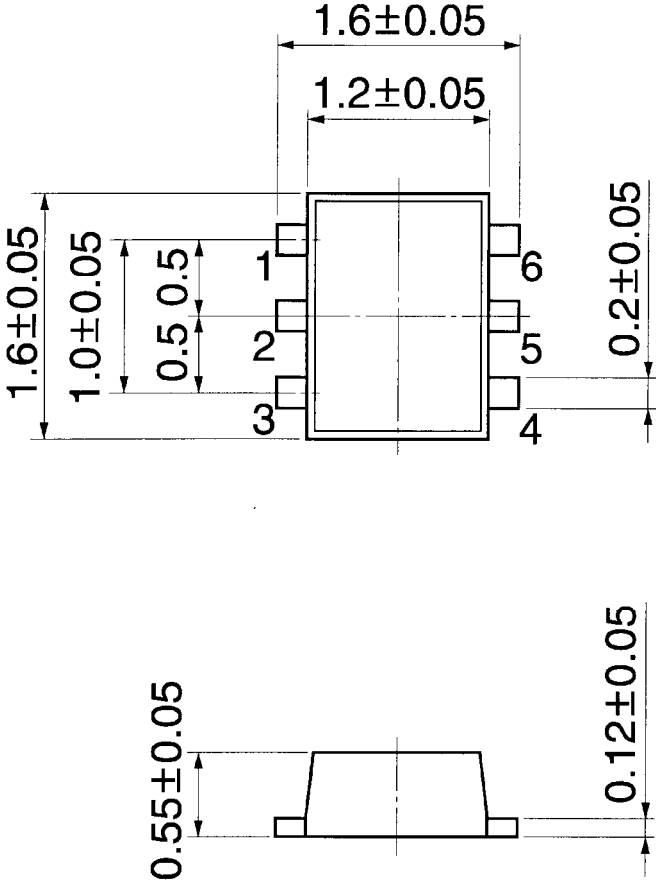
**Equivalent Circuit Diagram**



**Package Dimensions**

SSOP6-P-0.5

Unit : mm



Weight: 0.003 g (typ.)

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