

# ANTREX Electronics

Electronic Components Sourcing Information

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## Product Reference Information

**Part Number:** 2SK2593JQL  
**Manufacturer:** Panasonic Electronic Components  
**Package:** SC-89, SOT-490  
**Availability:** Please confirm with sales

**Product Page:**

<https://antrexco.com/product/details/panasonic-electronic-components/2sk2593jql.html>

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**Note:**

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

# 2SK2593J

## Silicon N-channel junction FET

For low-frequency amplification

For switching circuits

### ■ Features

- Low noise figure NF
- High gate-drain voltage (source open)  $V_{GDO}$
- SSMini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

### ■ Package

- Code  
SSMini3-F1
- Pin Name  
1: Source  
2: Drain  
3: Gate

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter                        | Symbol    | Rating      | Unit             |
|----------------------------------|-----------|-------------|------------------|
| Drain-source voltage             | $V_{DS}$  | 55          | V                |
| Gate-drain voltage (Source open) | $V_{GDO}$ | -55         | V                |
| Gate-source voltage (Drain open) | $V_{GSO}$ | -55         | V                |
| Drain current                    | $I_D$     | 30          | mA               |
| Gate current                     | $I_G$     | 10          | mA               |
| Power dissipation                | $P_D$     | 125         | mW               |
| Channel temperature              | $T_{ch}$  | 125         | $^\circ\text{C}$ |
| Storage temperature              | $T_{stg}$ | -55 to +125 | $^\circ\text{C}$ |

### ■ Marking Symbol: 2B

### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter                                                  | Symbol     | Conditions                                                                                   | Min | Typ | Max | Unit |
|------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------|-----|-----|-----|------|
| Gate-drain surrender voltage                               | $V_{GDS}$  | $I_G = -100\ \mu\text{A}$ , $V_{DS} = 0$                                                     | -55 |     |     | V    |
| Drain-source current *                                     | $I_{DSS}$  | $V_{DS} = 10\ \text{V}$ , $V_{GS} = 0$                                                       | 1.0 |     | 6.5 | mA   |
| Gate-source cutoff current                                 | $I_{GSS}$  | $V_{GS} = -30\ \text{V}$ , $V_{DS} = 0$                                                      |     |     | -10 | nA   |
| Gate-source cutoff voltage                                 | $V_{GSC}$  | $V_{DS} = 10\ \text{V}$ , $I_D = 10\ \mu\text{A}$                                            |     |     | -5  | V    |
| Forward transfer admittance                                | $ Y_{fs} $ | $V_{DS} = 10\ \text{V}$ , $I_D = 5\ \text{mA}$ , $f = 1\ \text{kHz}$                         | 2.5 | 7.5 |     | mS   |
| Short-circuit forward transfer capacitance (Common source) | $C_{iss}$  | $V_{DS} = 10\ \text{V}$ , $V_{GS} = 0$ , $f = 1\ \text{MHz}$                                 |     | 6.5 |     | pF   |
| Reverse transfer capacitance (Common source)               | $C_{rss}$  |                                                                                              |     | 1.9 |     | pF   |
| Noise figure                                               | NF         | $V_{DS} = 10\ \text{V}$ , $V_{GS} = 0$ , $f = 100\ \text{Hz}$<br>$R_g = 100\ \text{k}\Omega$ |     | 2.5 |     | dB   |

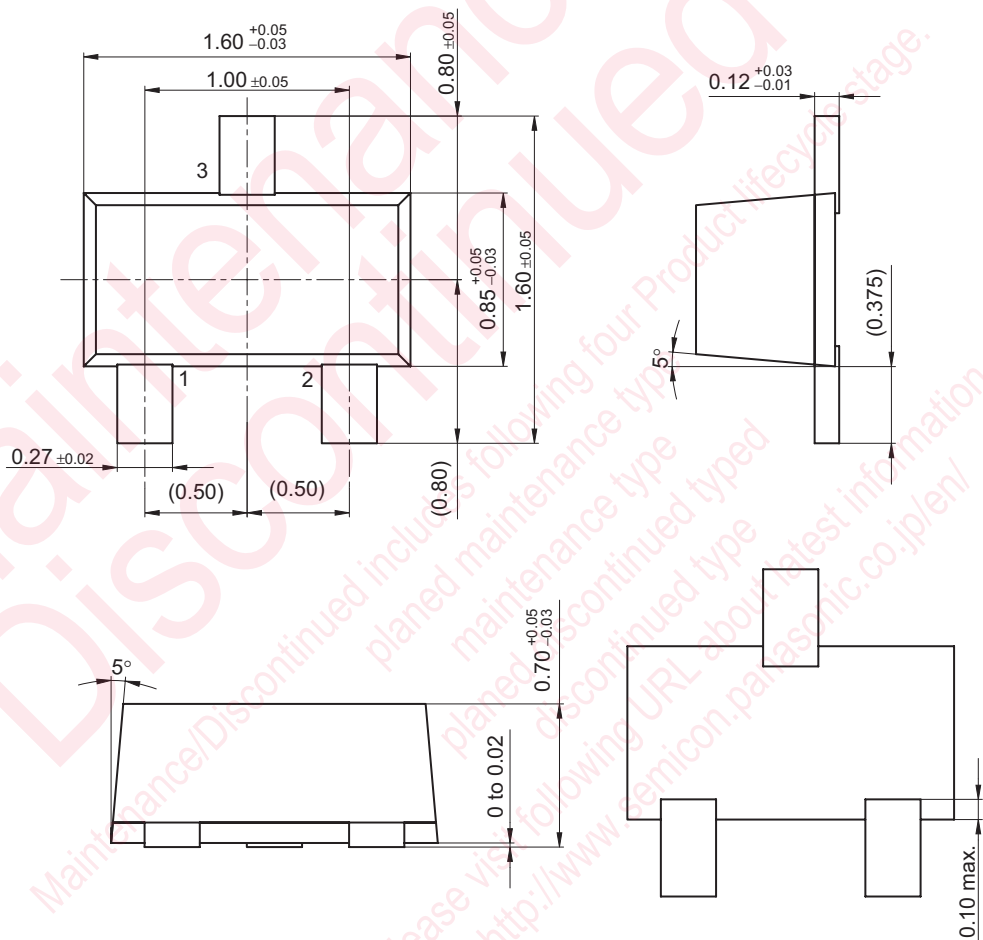
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

| Rank           | P          | Q          |
|----------------|------------|------------|
| $I_{DSS}$ (mA) | 1.0 to 3.0 | 2.0 to 6.5 |

## SSMini3-F1

Unit: mm



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