



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

N-Channel Junction Silicon FET

## 2SK3666 — Low-Frequency General-Purpose Amplifier, Impedance Converter Applications

### Applications

- Low-frequency general-purpose amplifier, impedance conversion, infrared sensor applications

### Features

- Small IGSS
- Small Ciss

### Specifications

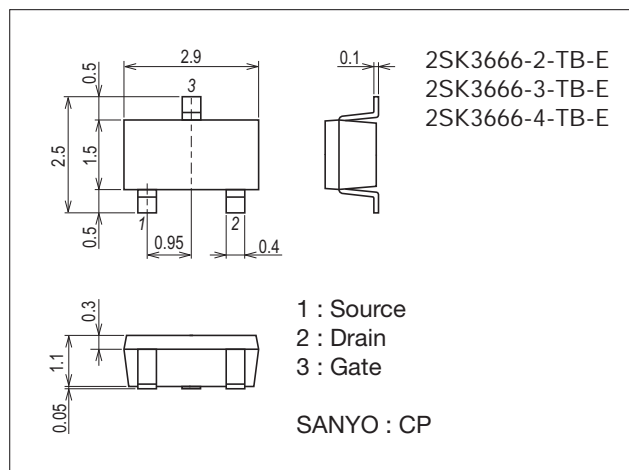
Absolute Maximum Ratings at Ta=25°C

| Parameter                   | Symbol           | Conditions | Ratings     | Unit |
|-----------------------------|------------------|------------|-------------|------|
| Drain-to-Source Voltage     | V <sub>DSX</sub> |            | 30          | V    |
| Gate-to-Drain Voltage       | V <sub>GDS</sub> |            | -30         | V    |
| Gate Current                | I <sub>G</sub>   |            | 10          | mA   |
| Drain Current               | I <sub>D</sub>   |            | 10          | mA   |
| Allowable Power Dissipation | P <sub>D</sub>   |            | 200         | mW   |
| Junction Temperature        | T <sub>j</sub>   |            | 150         | °C   |
| Storage Temperature         | T <sub>stg</sub> |            | -55 to +150 | °C   |

### Package Dimensions

unit : mm (typ)

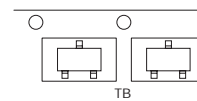
7013A-011



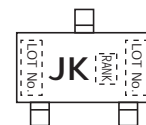
### Product & Package Information

- Package : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

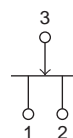
### Packing Type: TL



### Marking



### Electrical Connection



SANYO Semiconductor Co., Ltd.

<http://semicon.sanyo.com/en/network>

## Electrical Characteristics at Ta=25°C

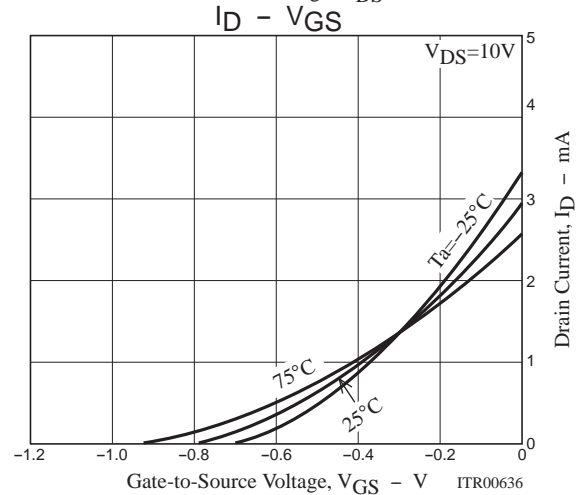
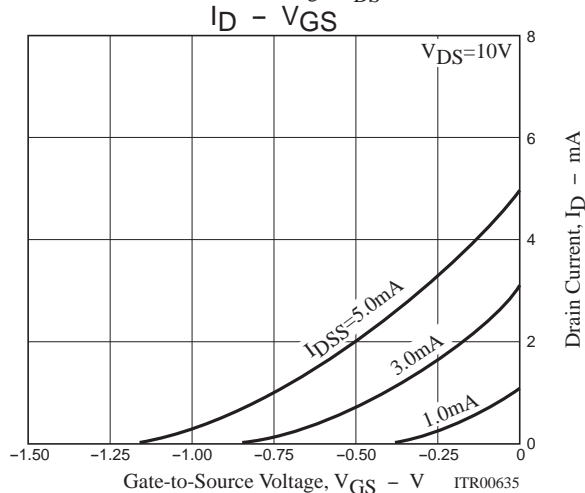
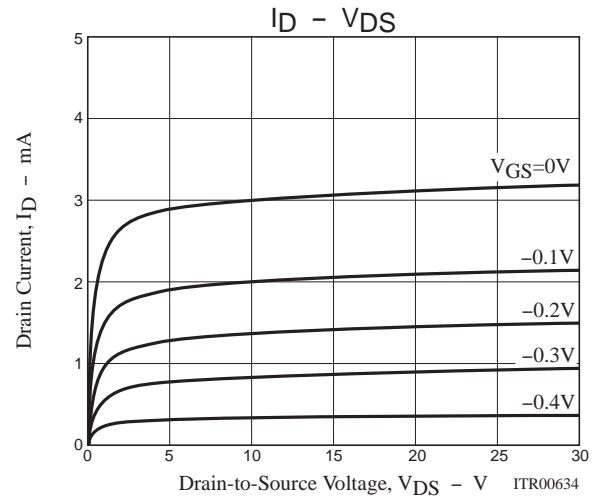
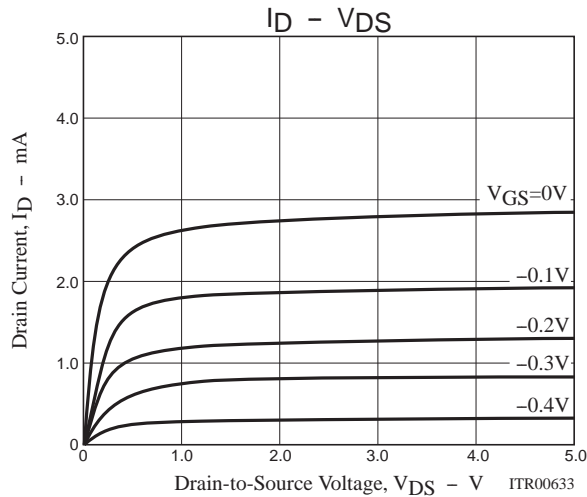
| Parameter                                  | Symbol               | Conditions  | Ratings |       |      | Unit |
|--|----------------------|---|---------|-------|------|------|
|  |                      |   | min     | typ   | max  |      |
| Gate-to-Drain Breakdown Voltage            | V(BR)GDS             | I <sub>G</sub> =-10μA, V <sub>DS</sub> =0V        | -30     |       |      | V    |
| Gate Cutoff Current                        | I <sub>GSS</sub>     | V <sub>GS</sub> =-20V, V <sub>DS</sub> =0V        |         |       | -1.0 | nA   |
| Cutoff Voltage                             | V <sub>GS(off)</sub> | V <sub>DS</sub> =10V, I <sub>D</sub> =1μA         | -0.18   | -0.95 | -2.2 | V    |
| Drain Current                              | I <sub>DSS</sub>     | V <sub>DS</sub> =10V, V <sub>GS</sub> =0V         | 0.6*    |       | 6.0* | mA   |
| Forward Transfer Admittance                | y <sub>fs</sub>      | V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1kHz | 3.0     | 6.5   |      | mS   |
| Input Capacitance                          | C <sub>iss</sub>     | V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1MHz |         | 4     |      | pF   |
| Reverse Transfer Capacitance               | C <sub>rss</sub>     | V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1MHz |         | 1.1   |      | pF   |
| Static Drain-to-Source On-State Resistance | R <sub>DS(on)</sub>  | V <sub>DS</sub> =10mV, V <sub>GS</sub> =10V       |         | 200   |      | Ω    |

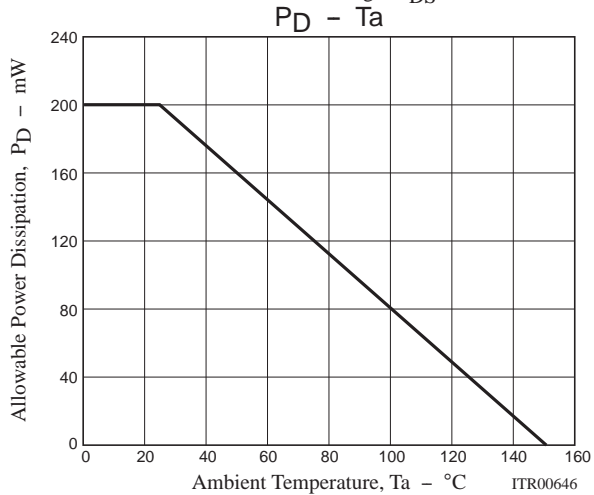
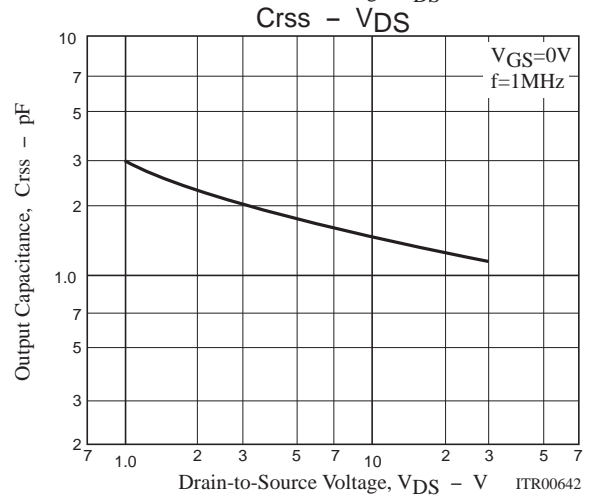
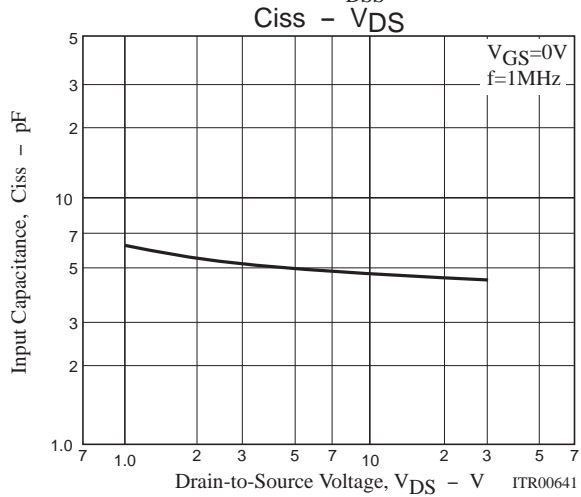
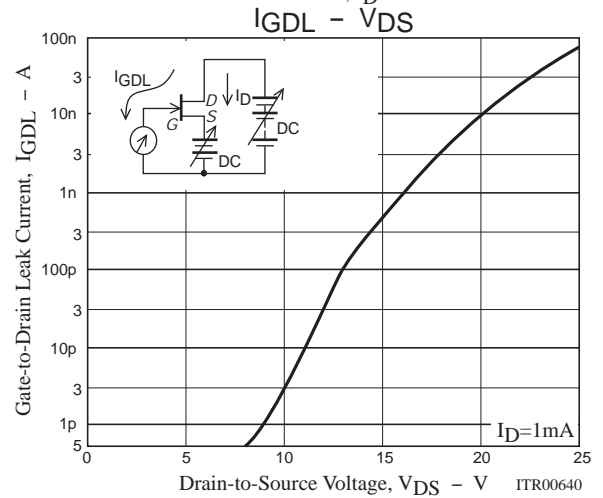
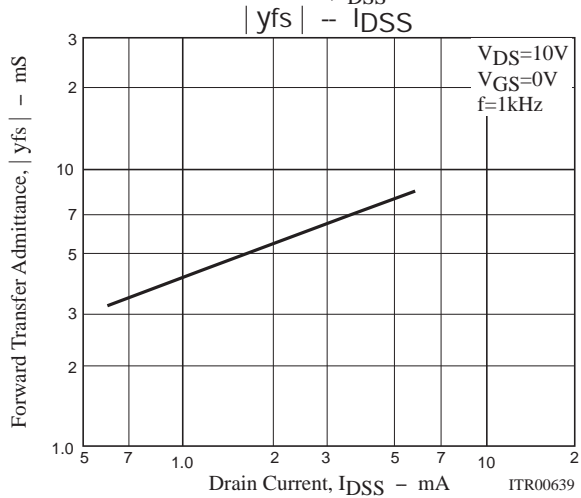
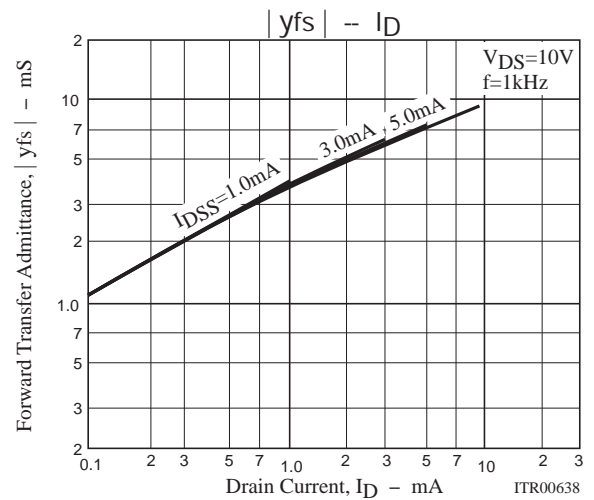
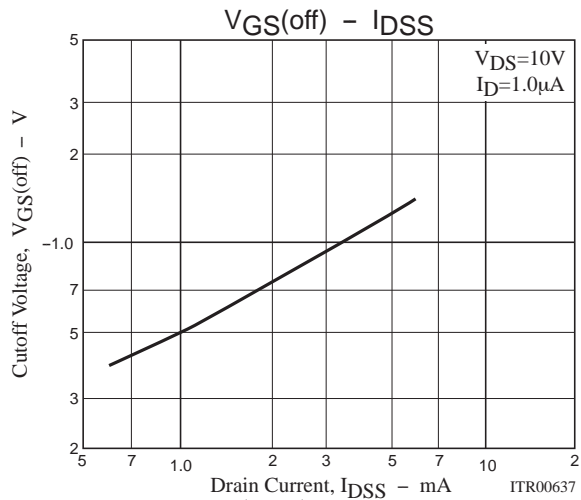
\* : The 2SK3666 is classified by I<sub>DSS</sub> as follows : (unit : mA)

| Rank             | 2          | 3          | 4          |
|------------------|------------|------------|------------|
| I <sub>DSS</sub> | 0.6 to 1.5 | 1.2 to 3.0 | 2.5 to 6.0 |

## Ordering Information

| Device         | Package | Shipping       | memo    |
|----------------|---------|----------------|---------|
| 2SK3666-2-TB-E | CP      | 3,000pcs./reel | Pb Free |
| 2SK3666-3-TB-E | CP      | 3,000pcs./reel |         |
| 2SK3666-4-TB-E | CP      | 3,000pcs./reel |         |





## Embossed Taping Specification

2SK3666-2-TB-E, 2SK3666-3-TB-E, 2SK3666-4-TB-E

### 1. Packing Format

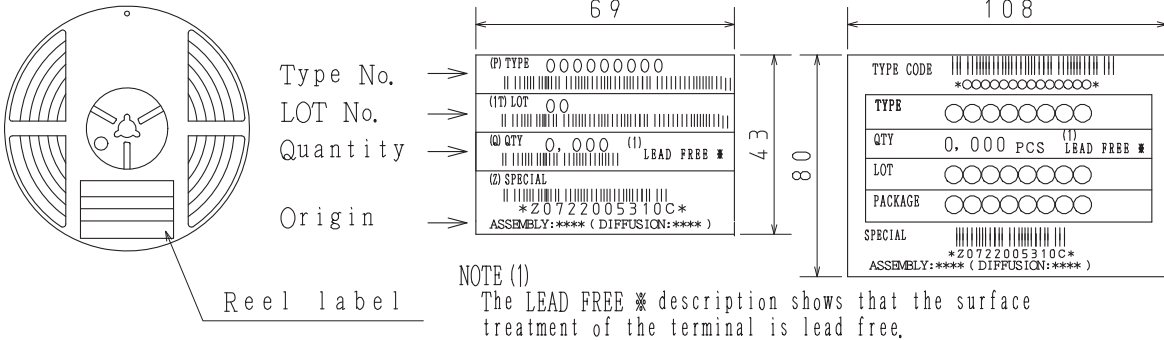
| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) |           |           | Packing format  |  |
|--------------|-------------------|---|-----------|-----------|---|--|
|              |                   | Reel                                      | Inner box | Outer box | Inner BOX (C-1)   | Outer BOX (A-7)  |
| CP           | CP                | 3,000                                     | 15,000    | 90,000    | 5 reels contained<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

Reel label, Inner box label  
(unit:mm)

Outer box label

It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

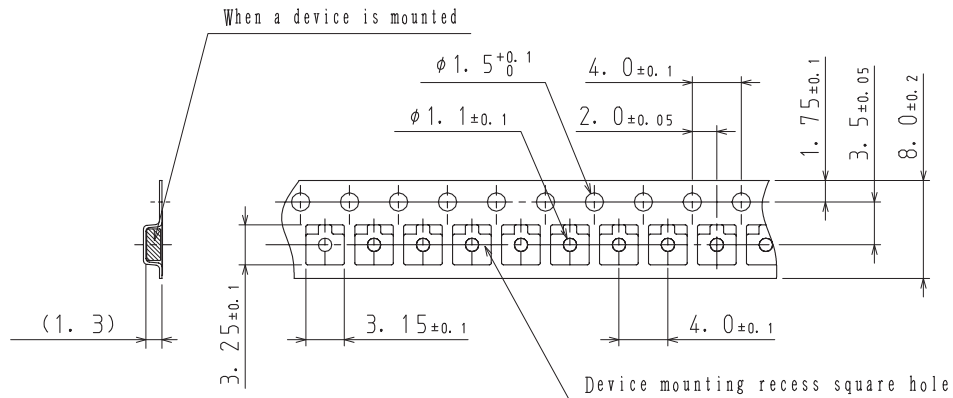
#### Packing method



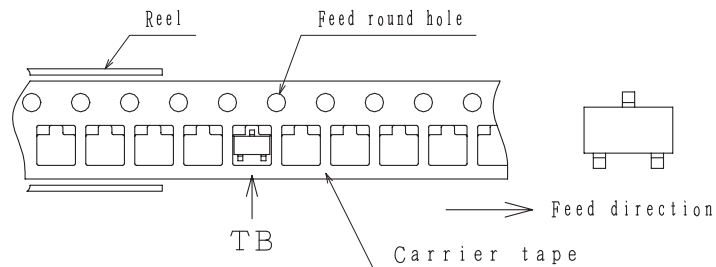
| Label       | JEITA Phase    |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3  |

### 2. Taping configuration

#### 2-1. Carrier tape size (unit:mm)



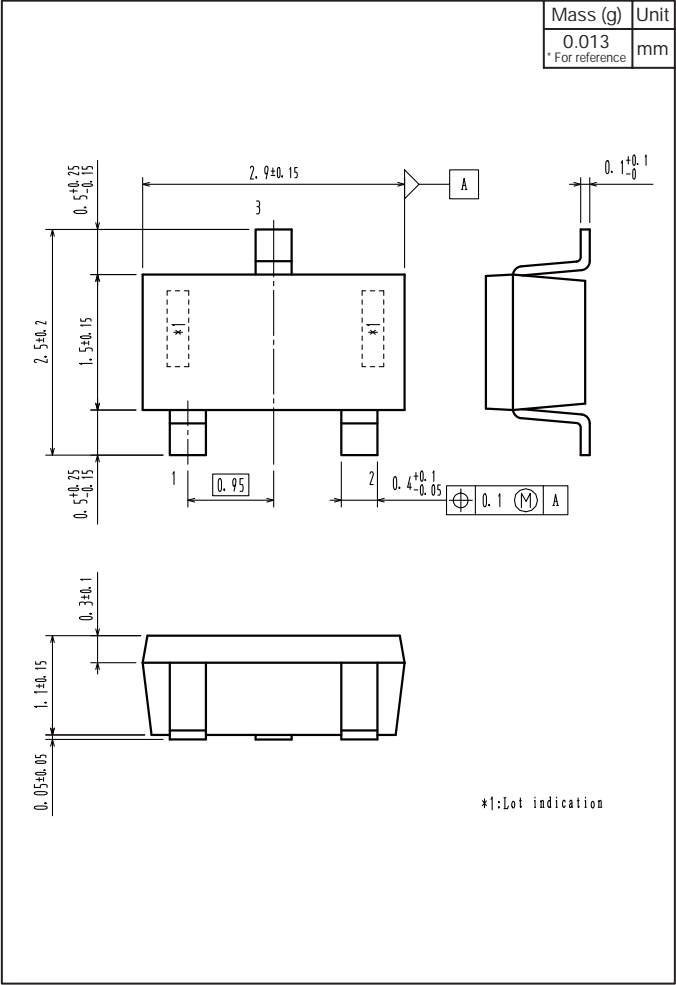
#### 2-2. Device placement direction



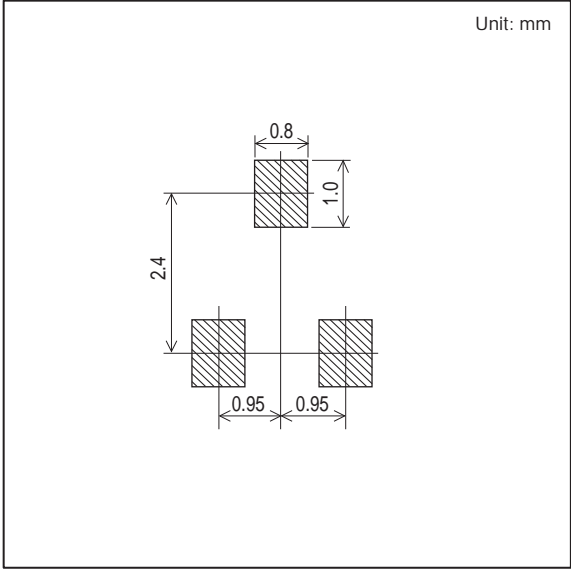
Those with one electrode terminal on the feed hole side.....TB

Outline Drawing

2SK3666-2-TB-E, 2SK3666-3-TB-E, 2SK3666-4-TB-E



Land Pattern Example



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