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# 2SK545

## N-Channel JFET 40V, 55 to 95 $\mu$ A, 0.10mS, CP

### Applications

- Impedance converter applications
- Infrared sensor

### Features

- Small IGSS
- Small Ciss
- Ultrasmall package permitting 2SK545-applied sets to be compact

### Specifications

Absolute Maximum Ratings at Ta=25°C

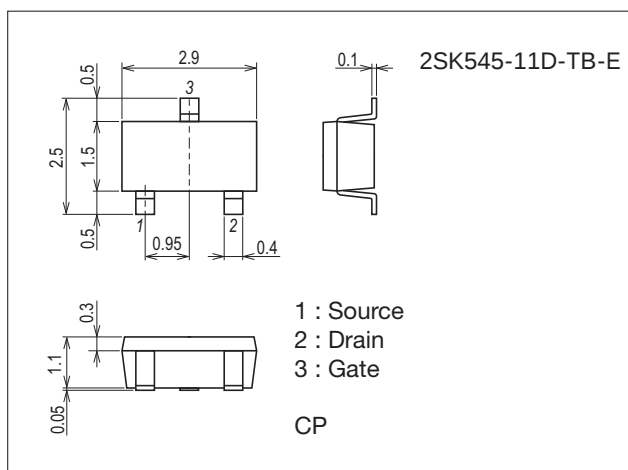
| Parameter                   | Symbol           | Conditions | Ratings     | Unit |
|-----------------------------|------------------|------------|-------------|------|
| Drain-to-Source Voltage     | V <sub>DSS</sub> |            | 40          | V    |
| Gate-to-Drain Voltage       | V <sub>GDS</sub> |            | -40         | V    |
| Gate Current                | I <sub>G</sub>   |            | 10          | mA   |
| Drain Current               | I <sub>D</sub>   |            | 1           | mA   |
| Allowable Power Dissipation | P <sub>D</sub>   |            | 100         | mW   |
| Junction Temperature        | T <sub>j</sub>   |            | 125         | °C   |
| Storage Temperature         | T <sub>stg</sub> |            | -55 to +125 | °C   |

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)

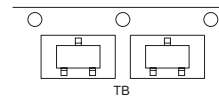
7013A-011



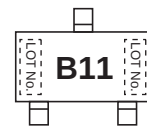
### Product & Package Information

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

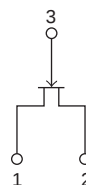
### Packing Type: TB



### Marking



### Electrical Connection

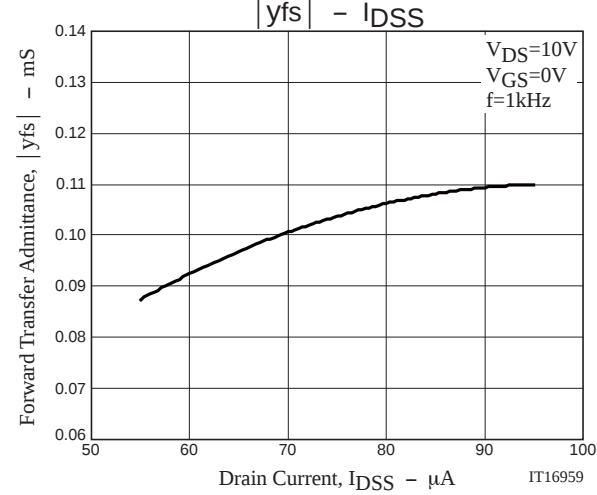
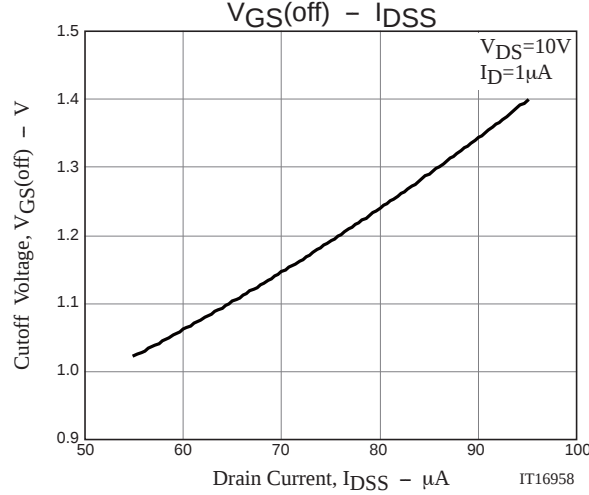
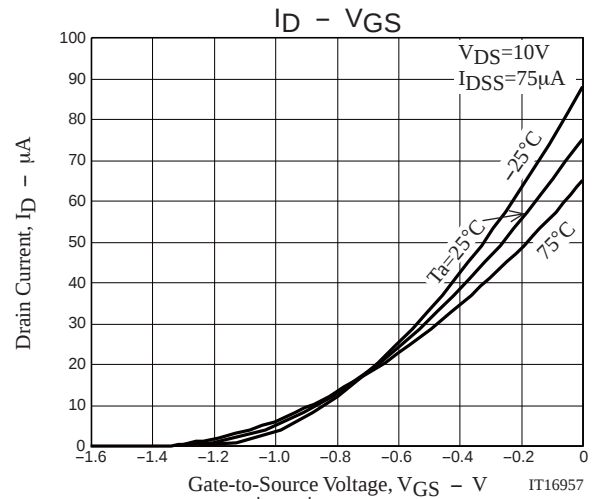
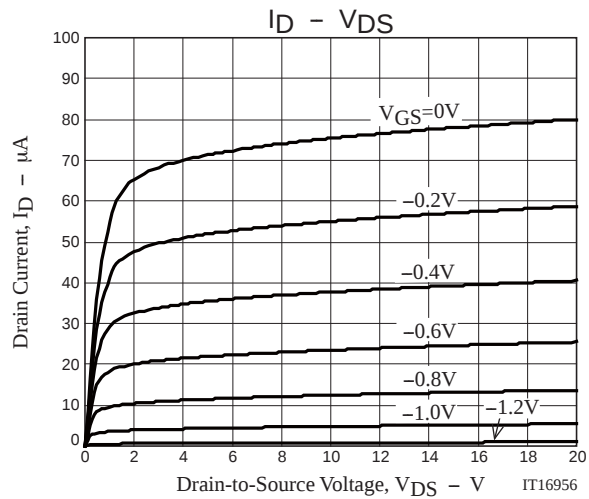


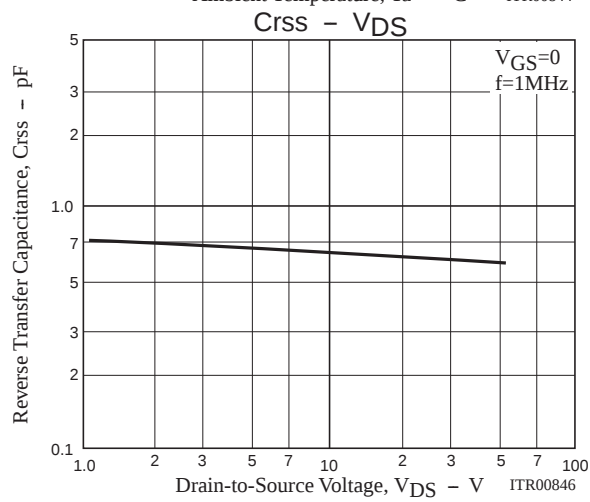
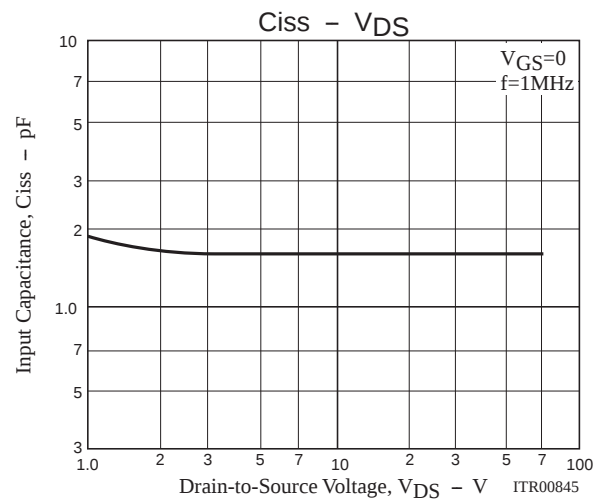
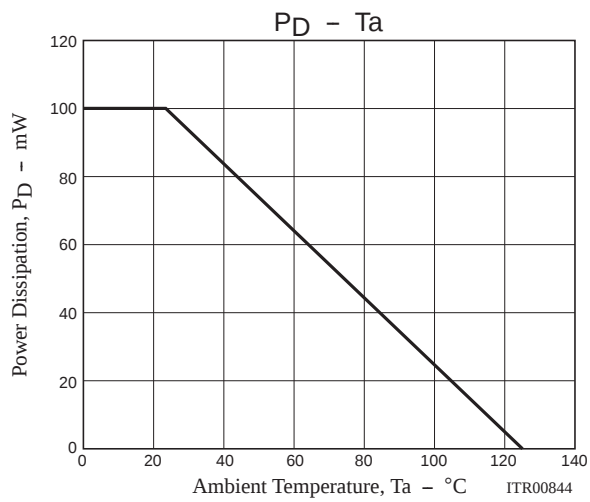
Electrical Characteristics at Ta=25°C

| Parameter                       | Symbol   | Conditions              | Ratings |      |      | Unit |
|---------------------------------|----------|-------------------------|---------|------|------|------|
|                                 |          |                         | min     | typ  | max  |      |
| Gate-to-Drain Breakdown Voltage | V(BR)GDS | ID=-10μA, VDS=0V        | -40     |      |      | V    |
| Gate Cutoff Current             | IGSS     | VGS=-20V, VDS=0V        |         |      | -500 | pA   |
| Drain Current                   | IDSS     | VDS=10V, VGS=0V         | 55      |      | 95   | μA   |
| Cutoff Voltage                  | VGS(off) | VDS=10V, ID=1μA         |         | -1.2 | -4.0 | V    |
| Forward Transfer Admittance     | yfs      | VDS=10V, VGS=0V, f=1kHz | 0.05    | 0.10 |      | mS   |
| Input Capacitance               | Ciss     | VDS=10V, VGS=0V, f=1MHz |         | 1.7  |      | pF   |
| Reverse Transfer Capacitance    | Crss     |                         |         | 0.7  |      | pF   |

Ordering Information

| Device          | Package | Shipping       | memo    |
|-----------------|---------|----------------|---------|
| 2SK545-11D-TB-E | CP      | 3,000pcs./reel | Pb Free |



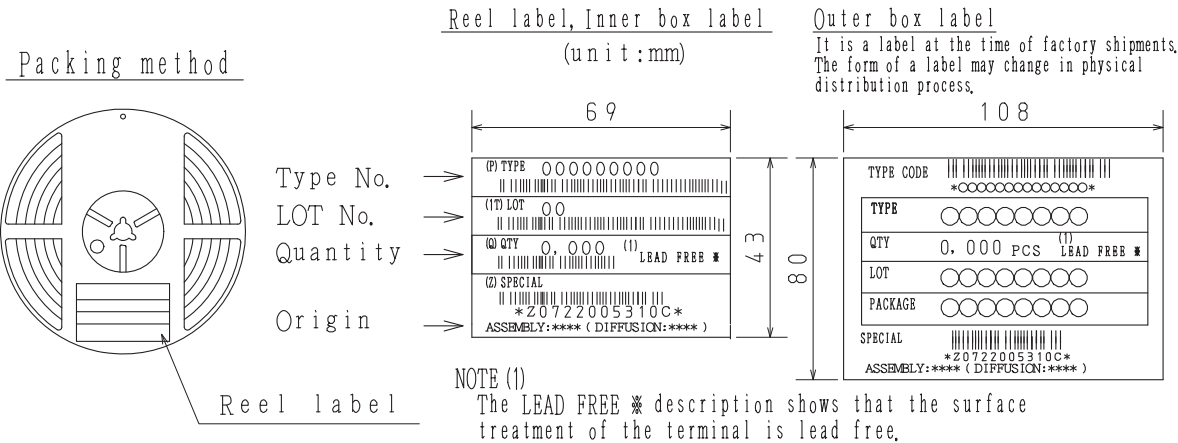


Embossed Taping Specification

2SK545-11D-TB-E

1. Packing Format

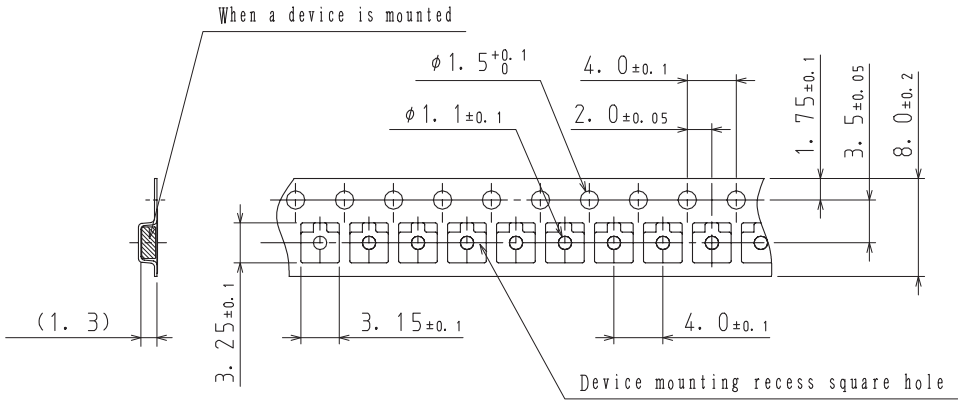
| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) |           |           | Packing format                                              |                                                                    |
|--------------|-------------------|-------------------------------------------|-----------|-----------|-------------------------------------------------------------|--------------------------------------------------------------------|
|              |                   | 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 |



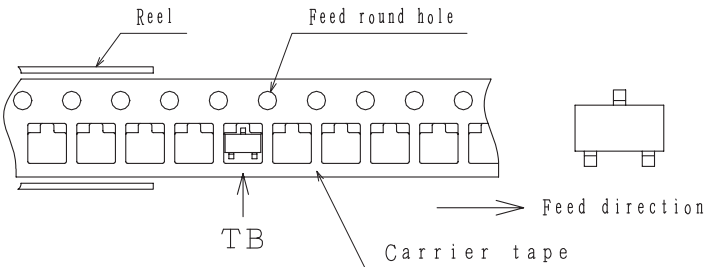
| Label       | JEITA Phase    |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3  |

2. Taping configuration

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

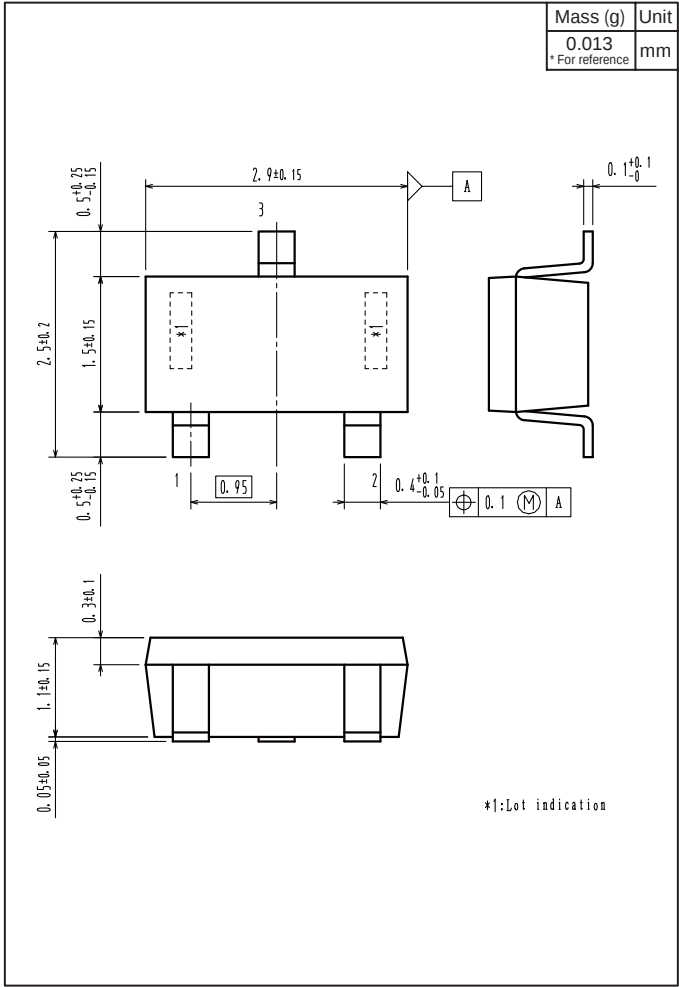


2-2. Device placement direction

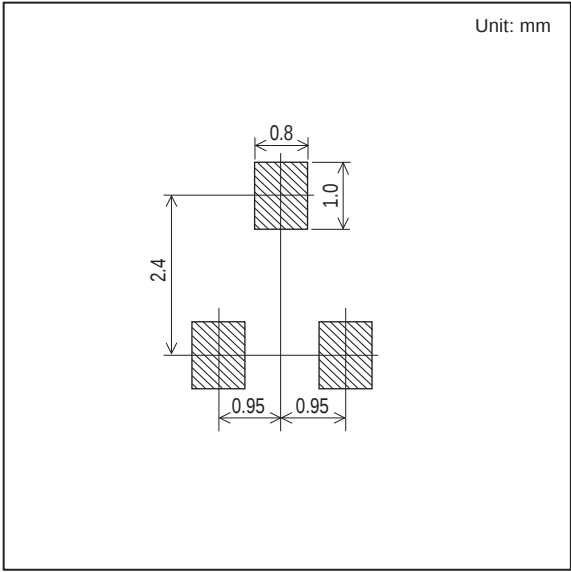


Those with one electrode terminal on the feed hole side.....TB

Outline Drawing  
2SK545-11D-TB-E



Land Pattern Example



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