

# 2SK1103

## Silicon N-Channel Junction FET

For switching

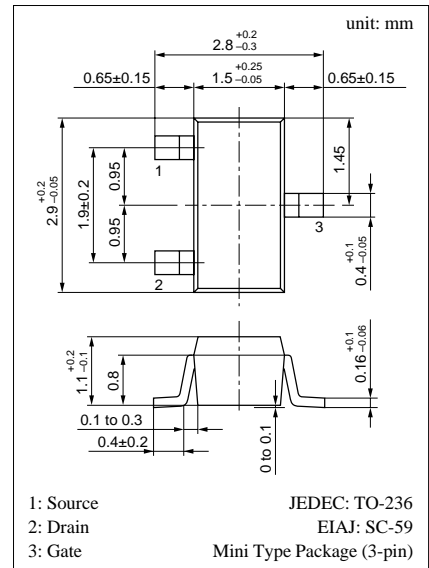
Complementary to 2SJ163

### ■ Features

- Low ON-resistance
- Low-noise characteristics

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

| Parameter                   | Symbol    | Ratings     | Unit |
|-----------------------------|-----------|-------------|------|
| Gate to Drain voltage       | $V_{GDS}$ | -65         | V    |
| Drain current               | $I_D$     | 20          | mA   |
| Gate current                | $I_G$     | 10          | mA   |
| Allowable power dissipation | $P_D$     | 150         | mW   |
| Channel temperature         | $T_{ch}$  | 150         | °C   |
| Storage temperature         | $T_{stg}$ | -55 to +150 | °C   |



Marking Symbol (Example): 4L

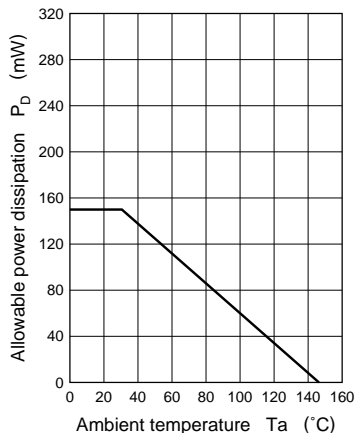
### ■ Electrical Characteristics (Ta = 25°C)

| Parameter                                    | Symbol       | Conditions                           | min | typ  | max  | Unit     |
|--|--------------|--------------------------------------|-----|------|------|----------|
| Drain to Source cut-off current              | $I_{DSS}^*$  | $V_{DS} = 10V, V_{GS} = 0$           | 0.2 |      | 6    | mA       |
| Gate to Source leakage current               | $I_{GSS}$    | $V_{GS} = -30V, V_{DS} = 0$          |     |      | -10  | nA       |
| Gate to Drain voltage                        | $V_{GDS}$    | $I_G = -10\mu A, V_{DS} = 0$         | -65 |      |      | V        |
| Gate to Source cut-off voltage               | $V_{GSC}$    | $V_{DS} = 10V, I_D = 10\mu A$        |     | -1.5 | -3.5 | V        |
| Forward transfer admittance                  | $ Y_{fs} $   | $V_{DS} = 10V, I_D = 1mA, f = 1kHz$  | 1.8 | 2.5  |      | mS       |
| Drain to Source ON-resistance                | $R_{DS(on)}$ | $V_{DS} = 10mV, V_{GS} = 0$          |     | 300  |      | $\Omega$ |
| Input capacitance (Common Source)            | $C_{iss}$    | $V_{DS} = 10V, V_{GS} = 0, f = 1MHz$ |     | 7    |      | pF       |
| Reverse transfer capacitance (Common Source) | $C_{rss}$    |                                      |     | 1.5  |      | pF       |

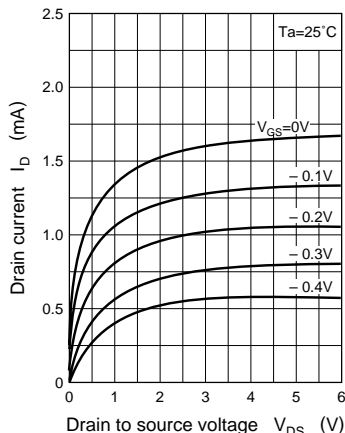
\*  $I_{DSS}$  rank classification

| Runk           | O        | P          | Q      | R        |
|----------------|----------|------------|--------|----------|
| $I_{DSS}$ (mA) | 0.2 to 1 | 0.6 to 1.5 | 1 to 3 | 2.5 to 6 |
| Marking Symbol | 4LO      | 4LP        | 4LQ    | 4LR      |

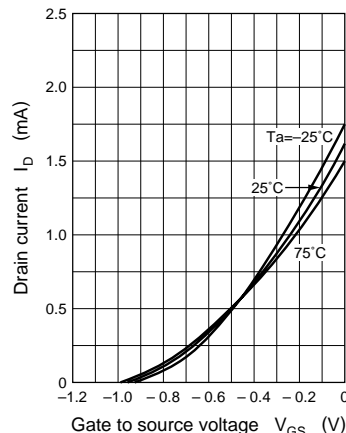
$P_D - T_a$



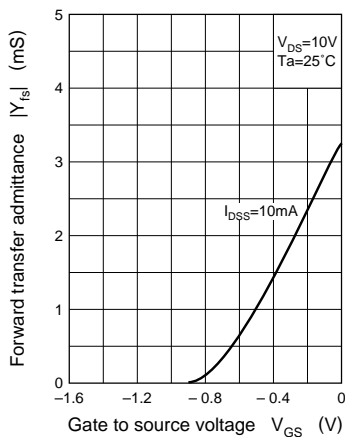
$I_D - V_{DS}$



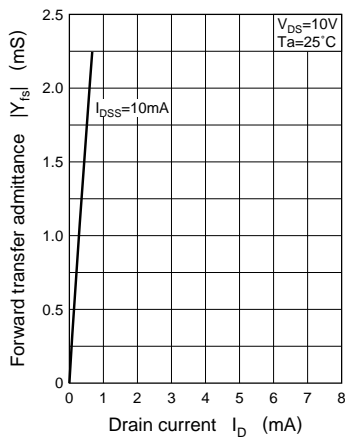
$I_D - V_{GS}$



$|Y_{fs}| - V_{GS}$



$|Y_{fs}| - I_D$



$C_{iss}, C_{oss}, C_{rss} - V_{DS}$

