

# 2SJ0164 (2SJ164)

## Silicon P-Channel Junction FET

For switching

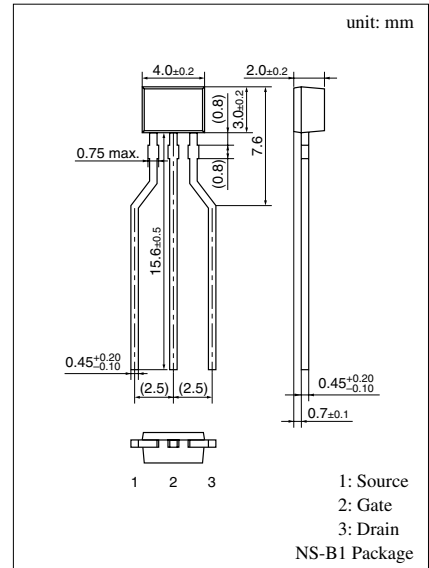
Complementary to 2SK1104

### ■ 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 | $P_D$     | 300         | mW   |
| Channel temperature         | $T_{ch}$  | 150         | °C   |
| Storage temperature         | $T_{stg}$ | -55 to +150 | °C   |



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

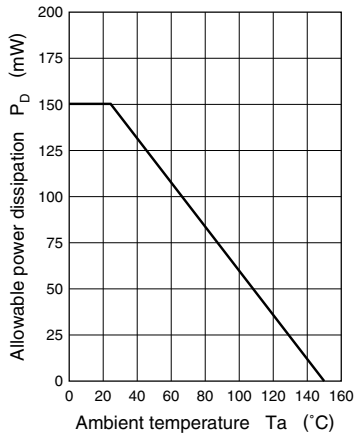
| Parameter                                    | Symbol       | Conditions                            | min  | typ | max | Unit     |
|--|--------------|---------------------------------------|------|-----|-----|----------|
| Drain to Source cut-off current              | $I_{DSS}^*$  | $V_{DS} = -10V, V_{GS} = 0$           | -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)            | $C_{iss}$    | $V_{DS} = -10V, V_{GS} = 0, f = 1MHz$ |      | 10  |     | pF       |
| Output capacitance (Common Source)           | $C_{oss}$    |                                       |      | 3   |     | pF       |
| Reverse transfer capacitance (Common Source) | $C_{rss}$    |                                       |      | 3   |     | pF       |

\*  $I_{DSS}$  rank classification

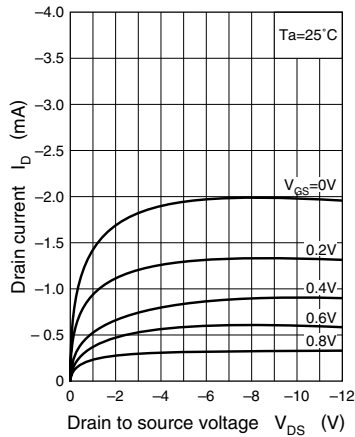
| Rank           | O          | P            | Q        | R          |
|----------------|------------|--------------|----------|------------|
| $I_{DSS}$ (mA) | -0.2 to -1 | -0.6 to -1.5 | -1 to -3 | -2.5 to -6 |

Note) The part number in the parenthesis shows conventional part number.

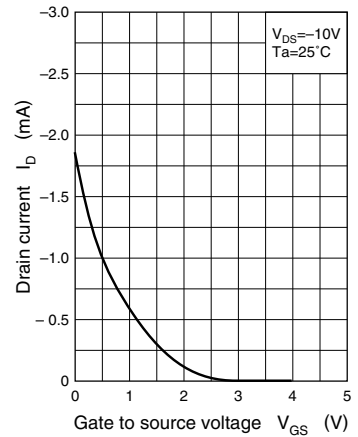
$P_D - T_a$



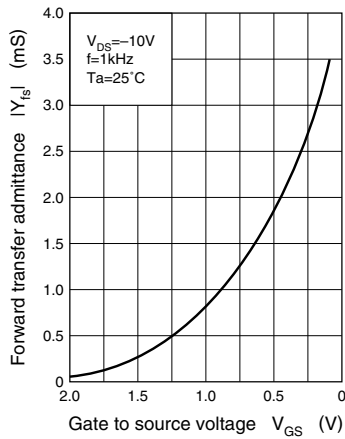
$I_D - V_{DS}$



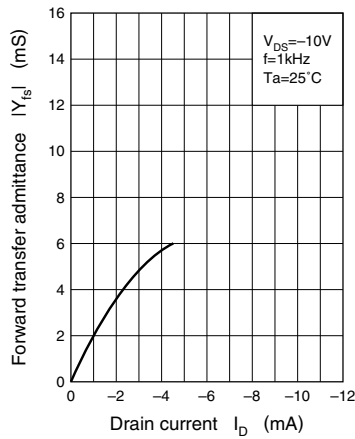
$I_D - V_{GS}$



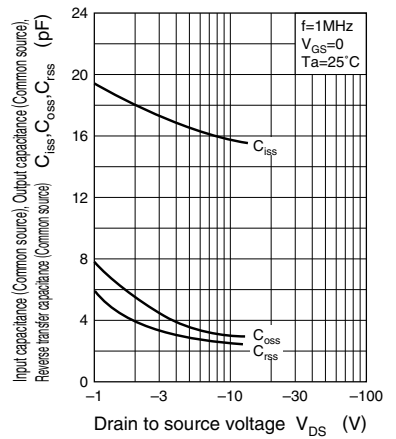
$|Y_{fs}| - V_{GS}$



$|Y_{fs}| - I_D$



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



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