

2SK0065 (2SK65)

Silicon N-Channel Junction FET

For impedance conversion in low frequency

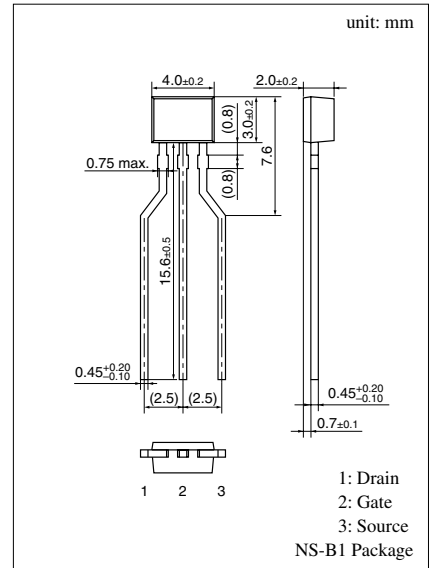
For electret capacitor microphone

■ Features

- Diode is connected between gate and source
- Low noise voltage

■ Absolute Maximum Ratings (Ta = 25°C)

| Parameter | Symbol | Ratings | Unit |
|-------------------------------|-----------|-------------|------|
| Drain to Source voltage | V_{DSO} | 12 | V |
| Gate to Drain voltage | V_{GDO} | -12 | V |
| Drain to Source current | I_{DSO} | 2 | mA |
| Drain to Gate current | I_{DGO} | 2 | mA |
| Gate to Source current | I_{GSO} | 2 | mA |
| Allowable power dissipation | P_D | 20 | mW |
| Operating ambient temperature | T_{opr} | -10 to +70 | °C |
| Storage temperature | T_{stg} | -20 to +150 | °C |



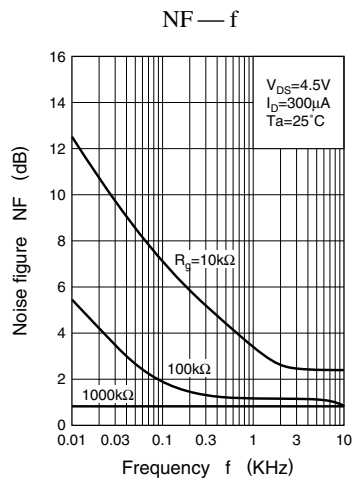
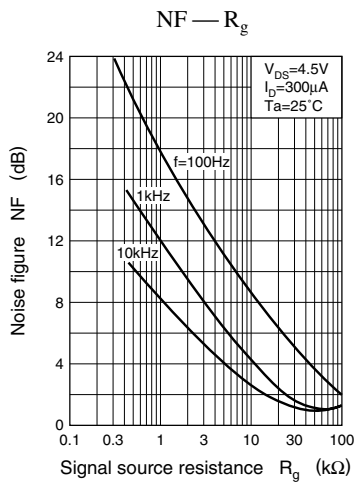
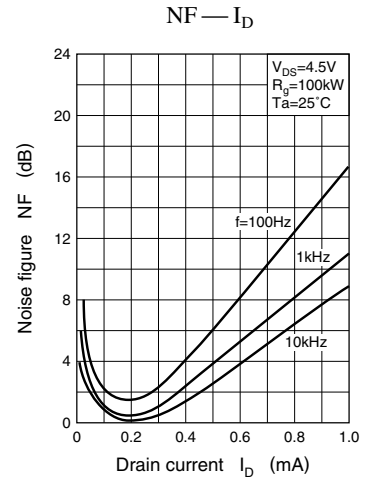
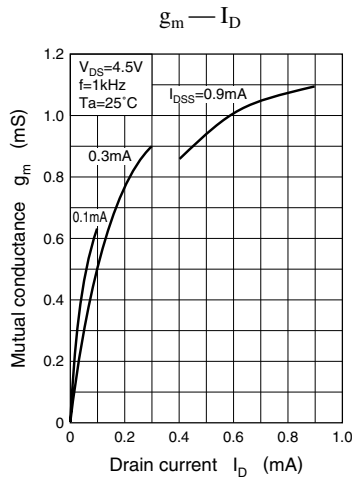
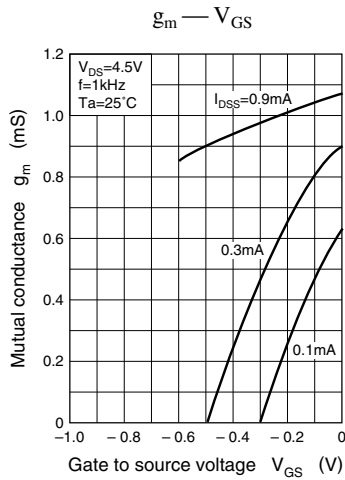
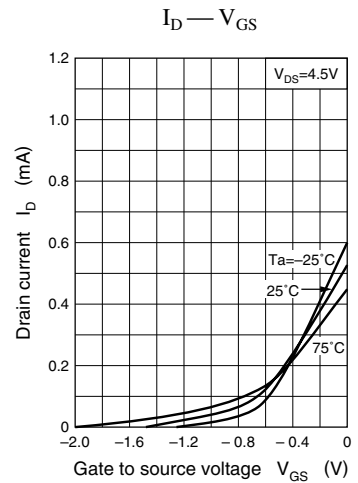
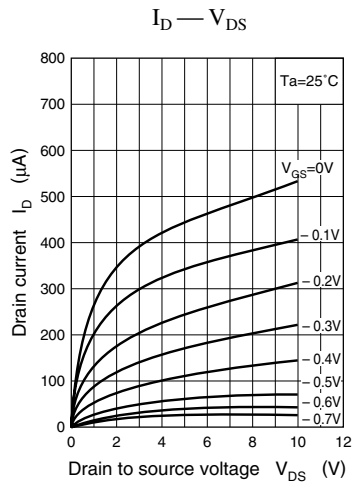
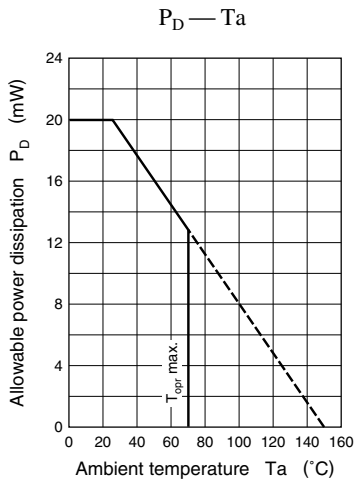
■ Electrical Characteristics (Ta = 25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---------------------------------|-------------|--|------|------|-----|---------|
| Drain to Source cut-off current | I_{DSS}^* | $V_{DS} = 4.5V, V_{GS} = 0, R_S = 2.2k\Omega \pm 1\%$ | 0.04 | | 0.8 | mA |
| Mutual conductance | g_m | $V_{DS} = 4.5V, V_{GS} = 0$ $R_S = 2.2k\Omega \pm 1\%, f = 1kHz$ | 300 | 500 | | μS |
| Noise figure | NV | $V_{DS} = 4.5V, R_S = 2.2k\Omega \pm 1\%$ $C_G = 10pF, A\text{-curve}$ | | | 4 | μV |
| Voltage gain | G_{V1}^* | $V_{DS} = 4.5V, R_S = 2.2k\Omega \pm 1\%$ $C_G = 10pF, e_G = 100mV, f = 70Hz$ | | -10 | | dB |
| | G_{V2}^* | $V_{DS} = 12V, R_S = 2.2k\Omega \pm 1\%$ $C_G = 10pF, e_G = 100mV, f = 70Hz$ | | -9.5 | | dB |
| | G_{V3}^* | $V_{DS} = 1V, R_S = 2.2k\Omega \pm 1\%$ $C_G = 10pF, e_G = 100mV, f = 70Hz$ | | -11 | | dB |

* I_{DSS} rank classification and G_V value

| Runk | P | Q |
|---------------------------------|-------------|-------------|
| I_{DSS} (mA) | 0.04 to 0.2 | 0.15 to 0.8 |
| G_{V1} (dB) | > -13 | > -12 |
| G_{V2} (dB) | > -12 | > -11 |
| $\Delta G_{V1} - G_{V2} $ (dB) | < 3 | < 3 |

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



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