

3SK285

Silicon N-Channel MOS FET

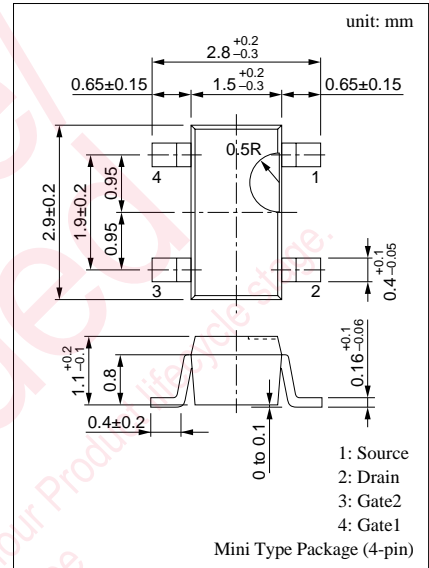
For UHF amplification

■ Features

- Low noise-figure (NF)
- Large power gain PG
- Mini-type package, allowing downsizing of the sets and automatic insertion through the tape/magazine packing.

■ Absolute Maximum Ratings (Ta = 25°C)

| Parameter | Symbol | Ratings | Unit |
|-----------------------------|-----------|-------------|------|
| Drain to Source voltage | V_{DS} | 13 | V |
| Gate 1 to Source voltage | V_{G1S} | ± 8 | V |
| Gate 2 to Source voltage | V_{G2S} | ± 8 | V |
| Drain current | I_D | ± 30 | mA |
| Allowable power dissipation | P_D | 150 | mW |
| Channel temperature | T_{ch} | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |



Marking Symbol: HV

■ Electrical Characteristics (Ta = 25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|--|------------|---|------|------|----------|------|
| Drain current | I_{DS} | $V_{DS} = 10V, V_{G1S} = 1V, V_{G2S} = 4V$ | 10 | 18 | 25 | mA |
| Gate 1 cut-off current | I_{G1SS} | $V_{DS} = V_{G2S} = 0, V_{G1S} = \pm 8V$ | | | ± 20 | nA |
| Gate 2 cut-off current | I_{G2SS} | $V_{DS} = V_{G1S} = 0, V_{G2S} = \pm 8V$ | | | ± 20 | nA |
| Gate 1 to Source cut-off voltage | V_{G1SC} | $V_{DS} = 10V, V_{G2S} = 4V, I_D = 0.1mA$ | -1 | | 1 | V |
| Gate 2 to Source cut-off voltage | V_{G2SC} | $V_{DS} = 10V, V_{G1S} = 4V, I_D = 0.1mA$ | 0 | | 1 | V |
| Drain to Source voltage | V_{DSX} | $I_D = 50\mu A, V_{G1S} = -5V, V_{G2S} = 0$ | 15 | | | V |
| Forward transfer admittance | $ Y_{fs} $ | $V_{DS} = 10V, I_D = 10mA, V_{G2S} = 4V, f = 1kHz$ | 24 | 29 | 34 | mS |
| Input capacitance (Common Source) | C_{iss} | $V_{DS} = 10V, V_{G1S} = V_{G2S} = -5V$ $f = 1MHz$ | 1.4 | 1.7 | 2.2 | pF |
| Output capacitance (Common Source) | C_{oss} | | 0.9 | 1.2 | pF | |
| Reverse transfer capacitance (Common Source) | C_{rss} | | 0.02 | pF | | |
| Power gain | PG | $V_{DS} = 8V, I_D = 8mA, V_{G2S} = 3V$ | 15.8 | 17.5 | 20 | dB |
| Noise figure | NF | $f = 800MHz$ | | 2.2 | 2.7 | dB |

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