2SK3546J

Silicon N-Channel MOSFET

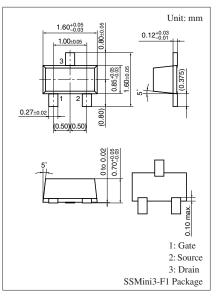
For switching

Features

- High-speed switching
- Wide frequency band

Absolute Maximum Ratings $T_a = 25^{\circ}C$

| Parameter | Symbol | Rating | Unit | |
|----------------------------------|------------------|-------------|------|--|
| Drain-source voltage | V _{DS} | 50 | V | |
| Gate-source voltage (Drain open) | V _{GSO} | ±7 | V | |
| Drain current | ID | 100 | mA | |
| Peak drain current | I _{DP} | 200 | mA | |
| Power dissipation | P _D | 125 | mW | |
| Channel temperature | T _{ch} | 125 | °C | |
| Storage temperature | T _{stg} | -55 to +125 | °C | |



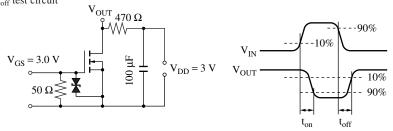
Marking Symbol: 5F

Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

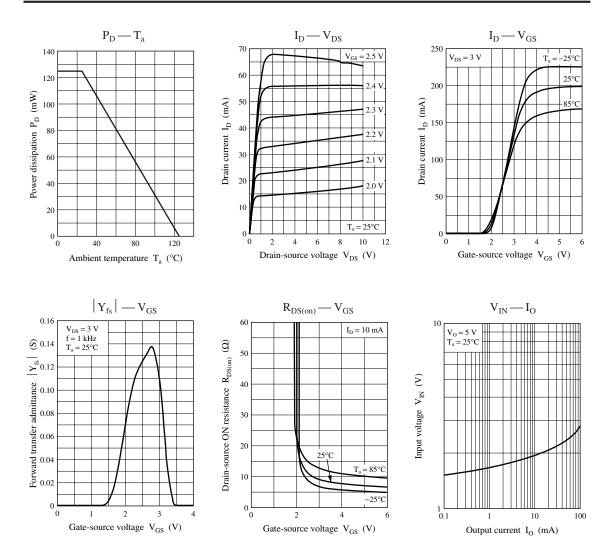
| Parameter | Symbol | Conditions | Min | Тур | Max | Unit |
|--|---------------------|--|-----|-----|------|------|
| Drain-source surrender voltage | V _{DSS} | $I_D = 10 \ \mu A, \ V_{GS} = 0$ | 50 | | | V |
| Drain-source cutoff current | I _{DSS} | $V_{DS} = 50 \text{ V}, V_{GS} = 0$ | | | 1.0 | μΑ |
| Gate-source cutoff current | I _{GSS} | $V_{GS} = \pm 7 V, V_{DS} = 0$ | | | ±5.0 | μΑ |
| Gate threshold voltage | V _{th} | $I_D = 1.0 \ \mu A, \ V_{DS} = 3 \ V$ | 0.9 | 1.2 | 1.5 | V |
| Drain-source ON resistance | R _{DS(on)} | $I_D = 10 \text{ mA}, V_{GS} = 2.5 \text{ V}$ | | 8 | 15 | Ω |
| | | $I_D = 10 \text{ mA}, V_{GS} = 4.0 \text{ V}$ | | 6 | 12 | |
| Forward transfer admittance | Y _{fs} | $I_D = 10 \text{ mA}, V_{DS} = 3 \text{ V}, f = 1 \text{ kHz}$ | 20 | 60 | | mS |
| Short-circuit forward transfer capacitance (Common source) | C _{iss} | $V_{DS} = 3 V, V_{GS} = 0, f = 1 MHz$ | | 12 | | pF |
| Short-circuit output capacitance (Common source) | C _{oss} | $V_{DS} = 3 V, V_{GS} = 0, f = 1 MHz$ | | 7 | | pF |
| Reverse transfer capacitance (Common source) | C _{rss} | $V_{DS} = 3 V, V_{GS} = 0, f = 1 MHz$ | | 3 | | pF |
| Turn-on time * | t _{on} | $V_{DD} = 3 V, V_{GS} = 0 V \text{ to } 3 V, R_L = 470 \Omega$ | | 200 | | ns |
| Turn-off time * | t _{off} | $V_{DD} = 3 V, V_{GS} = 3 V \text{ to } 0 V, R_L = 470 \Omega$ | | 200 | | ns |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.





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