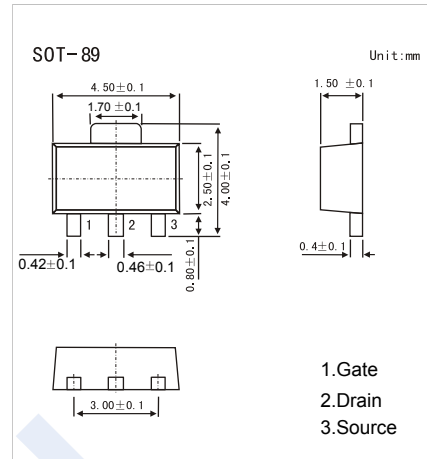
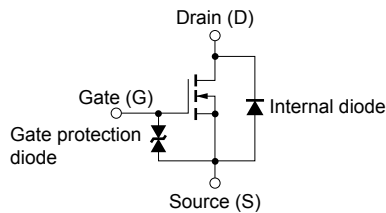


N-Channel MOSFET

2SK2109

Features

- $V_{DS} (V) = 60V$
- $I_D = 0.5A$
- $R_{DS(ON)} < 1 \Omega$ ($V_{GS} = 4V$)
- $R_{DS(ON)} < 0.8 \Omega$ ($V_{GS} = 10V$)



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

| Parameter | Symbol | Rating | Unit |
|-------------------------------|-----------|------------|------------|
| Drain-Source Voltage | V_{DS} | 60 | V |
| Gate-Source Voltage | V_{GS} | ± 20 | |
| Continuous Drain Current | I_D | 0.5 | A |
| Pulsed Drain Current (Note.1) | I_{DM} | 1 | |
| Power Dissipation | P_D | 2 | W |
| Junction Temperature | T_J | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55 to 150 | |

Note.1: $PW \leq 10ms$, Duty Cycle $\leq 50\%$

Electrical Characteristics $T_a = 25^\circ C$

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-----------------------------------|---------------|---|-----|-----|----------|----------|
| Drain-Source Breakdown Voltage | V_{DSS} | $I_D=250 \mu A$, $V_{GS}=0V$ | 60 | | | V |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS}=60V$, $V_{GS}=0V$ | | | 1 | μA |
| Gate-Body Leakage Current | I_{GSS} | $V_{DS}=0V$, $V_{GS}=\pm 20V$ | | | ± 10 | μA |
| Gate Cut-off Voltage | $V_{GS(off)}$ | $V_{DS}=10V$, $I_D=1mA$ | 0.8 | | 2 | V |
| Static Drain-Source On-Resistance | $R_{DS(on)}$ | $V_{GS}=4V$, $I_D=0.3A$ | | | 1 | Ω |
| | | $V_{GS}=10V$, $I_D=0.3A$ | | | 0.8 | |
| Forward Transconductance | g_{FS} | $V_{DS}=10V$, $I_D=0.3A$ | 0.4 | | | S |
| Input Capacitance | C_{iss} | $V_{GS}=0V$, $V_{DS}=10V$, $f=1MHz$ | | 111 | | μF |
| Output Capacitance | C_{oss} | | | 55 | | |
| Reverse Transfer Capacitance | C_{rss} | | | 19 | | |
| Turn-On DelayTime | $t_{d(on)}$ | $V_{GS(on)}=10V$, $V_{DS}=25V$, $I_D=0.3A$, $R_L=83 \Omega$, $R_G=10 \Omega$ | | 2.2 | | ns |
| Turn-On Rise Time | t_r | | | 1.5 | | |
| Turn-Off DelayTime | $t_{d(off)}$ | | | 35 | | |
| Turn-Off Fall Time | t_f | | | 19 | | |

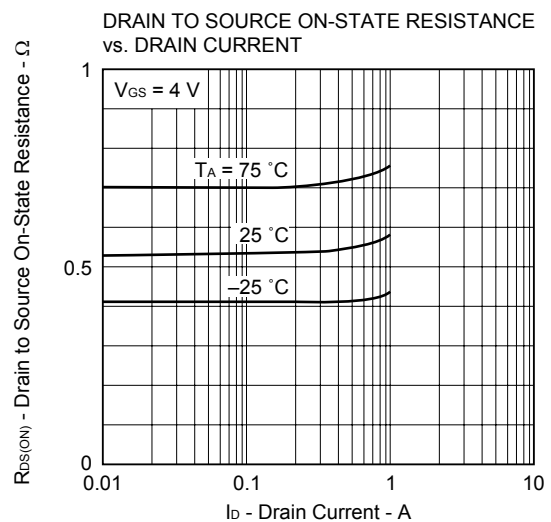
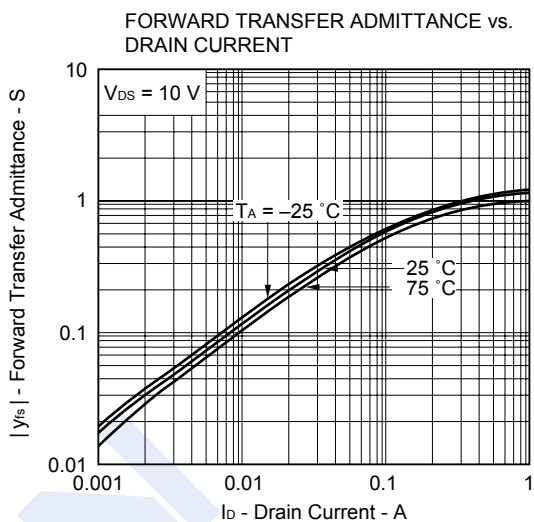
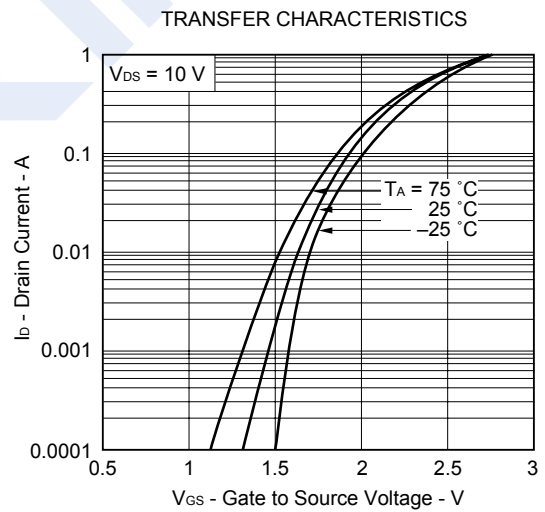
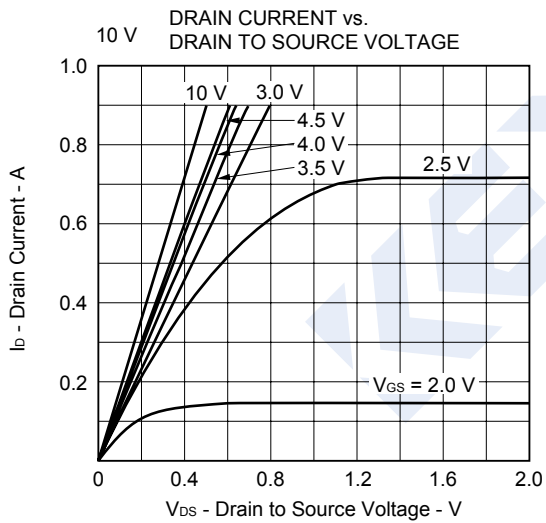
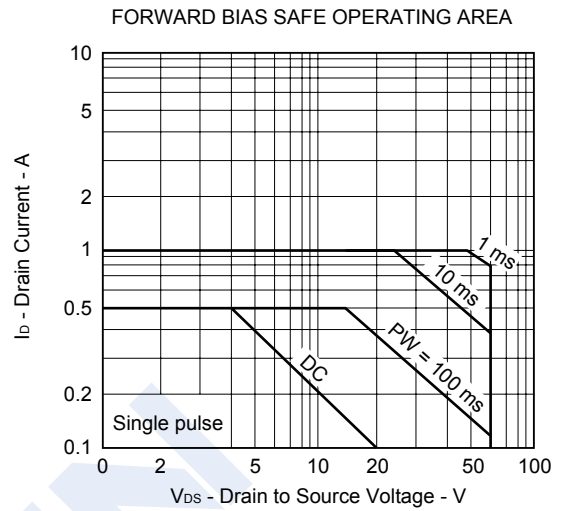
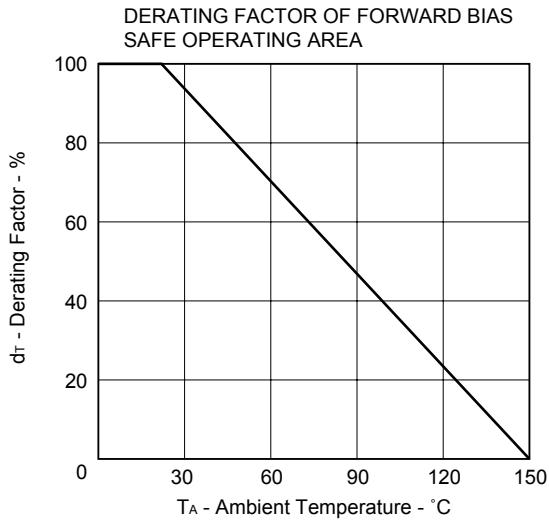
Marking

| | |
|---------|----|
| Marking | NS |
|---------|----|

N-Channel MOSFET

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Typical Characteristics



N-Channel MOSFET 2SK2109

■ Typical Characteristics

