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| SANYO | No.4209 | 2SK1898 |
| | | N-Channel MOS Silicon FET Very High-Speed Switching Applications |

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Surface mount type device making the following possible.
 - Reduction in the number of manufacturing processes for 2SK1898-applied equipment.
 - High density surface mount applications.
 - Small size of 2SK1898-applied equipment.

Absolute Maximum Ratings at Ta = 25°C

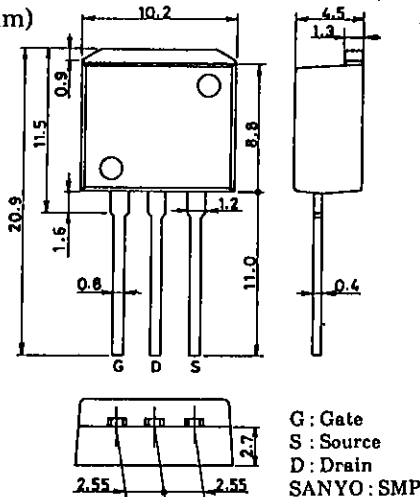
| | | | | |
|-----------------------------|-----------|--|-------------|----|
| Drain to Source Voltage | V_{DS} | | 60 | V |
| Gate to Source Voltage | V_{GS} | | ±15 | V |
| Drain Current(DC) | I_D | | 15 | A |
| Drain Current(Pulse) | I_{DP} | $PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$ | 60 | A |
| Allowable Power Dissipation | P_D | | 1.65 | W |
| | | $T_c = 25^\circ C$ | 50 | W |
| Channel Temperature | T_{ch} | | 150 | °C |
| Storage Temperature | T_{stg} | | -55 to +150 | °C |

Electrical Characteristics at Ta = 25°C

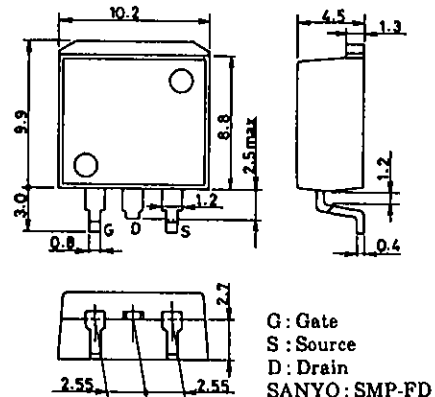
| | | | min | typ | max | |
|--|---------------|----------------------------------|-----|------|-----|----|
| D-S Breakdown Voltage | $V_{(BR)DSS}$ | $I_D = 1mA, V_{GS} = 0$ | 60 | | | V |
| G-S Breakdown Voltage | $V_{(BR)GSS}$ | $I_G = \pm 100\mu A, V_{DS} = 0$ | ±15 | | | V |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS} = 60V, V_{GS} = 0$ | | | 100 | μA |
| Gate to Source Leakage Current | I_{GSS} | $V_{GS} = \pm 12V, V_{DS} = 0$ | | | ±10 | μA |
| Cutoff Voltage | $V_{GS(off)}$ | $V_{DS} = 10V, I_D = 1mA$ | 1.0 | | 2.0 | V |
| Forward Transfer Admittance | $ Y_{fs} $ | $V_{DS} = 10V, I_D = 8A$ | 6.5 | 10.5 | | S |
| Static Drain to Source on State Resistance | $R_{DS(on)}$ | $I_D = 8A, V_{GS} = 10V$ | | 60 | 80 | mΩ |
| | $R_{DS(on)}$ | $I_D = 8A, V_{GS} = 4V$ | | 80 | 110 | mΩ |

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Package Dimensions 2093
(unit : mm)



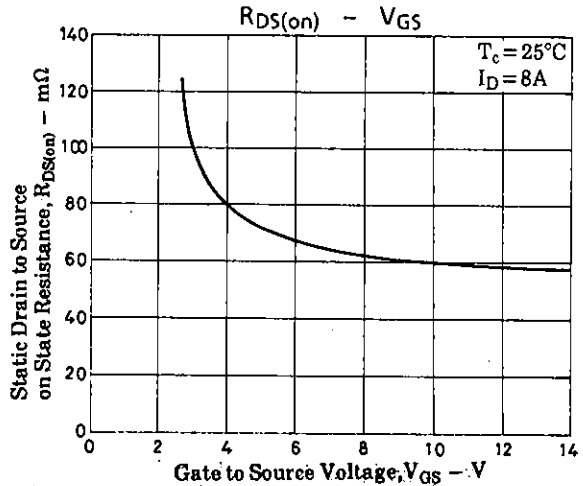
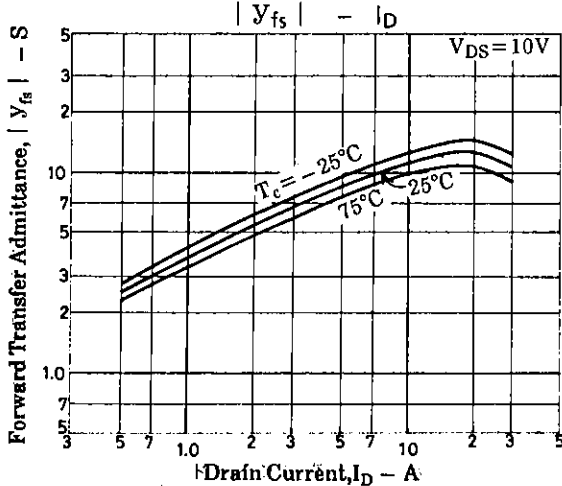
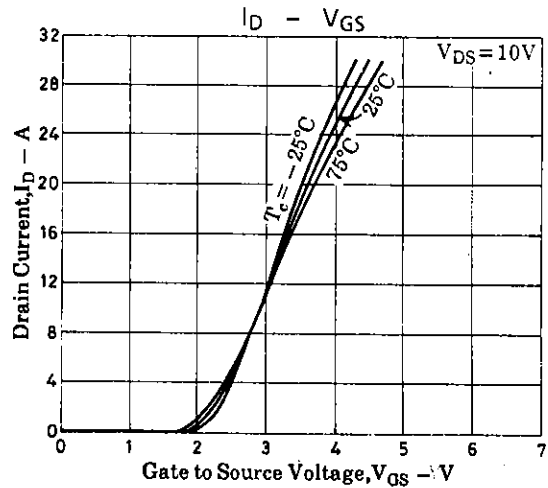
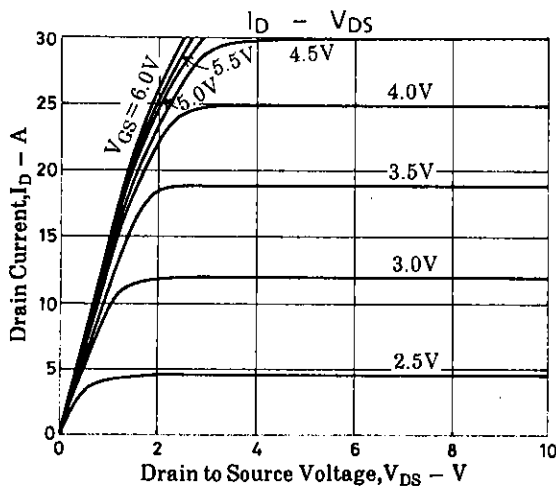
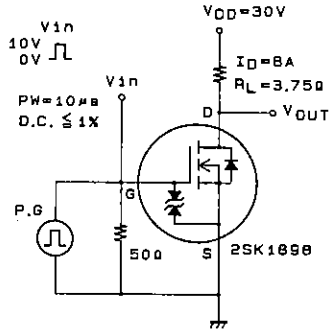
Package Dimensions 2090
(unit : mm)

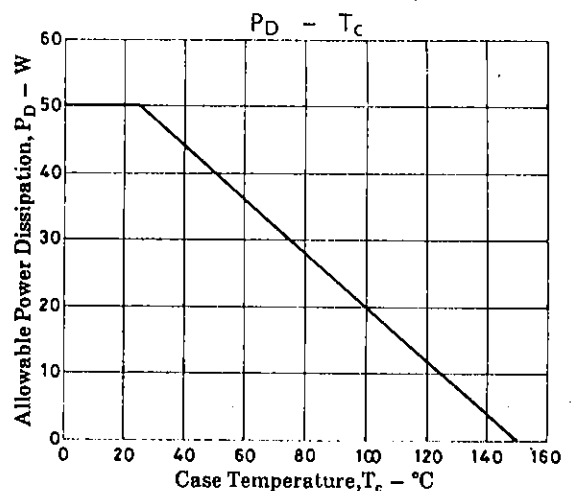
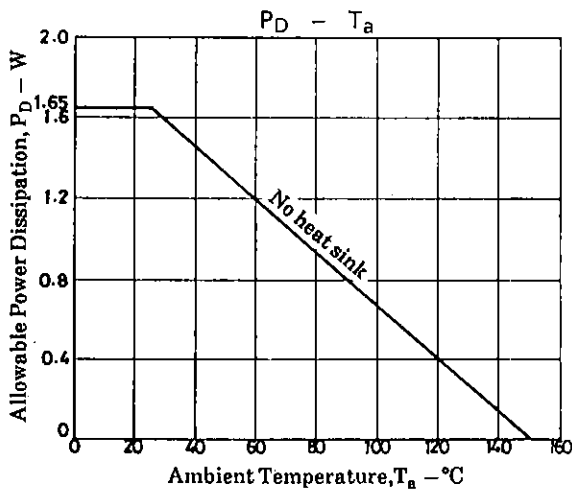
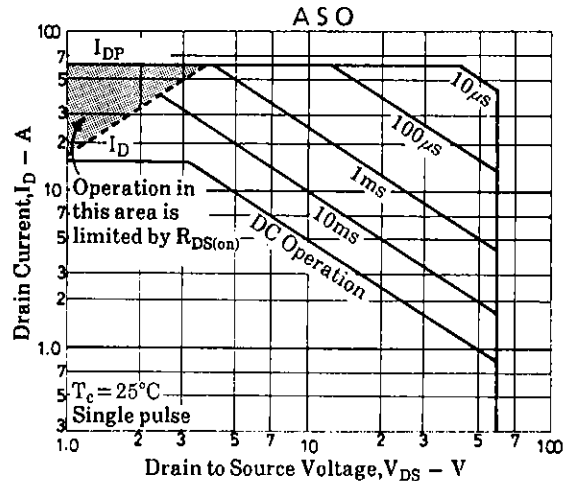
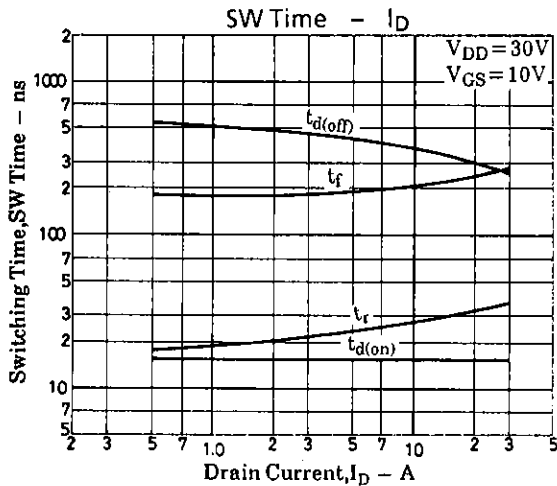
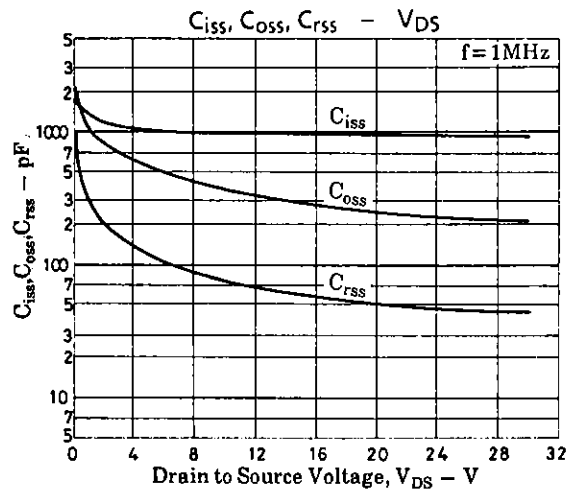
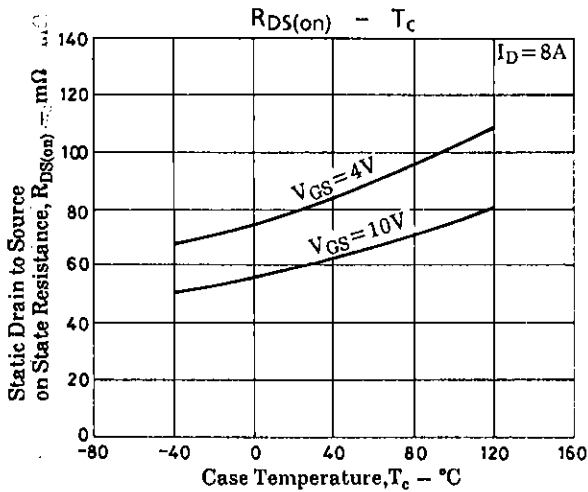


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| | | | min | typ | max. | unit |
|------------------------------|--------------|-----------------------------|-----|-----|------|------|
| Input Capacitance | C_{iss} | $V_{DS}=20V, f=1MHz$ | | 950 | | pF |
| Output Capacitance | C_{oss} | $V_{DS}=20V, f=1MHz$ | | 250 | | pF |
| Reverse Transfer Capacitance | C_{rss} | $V_{DS}=20V, f=1MHz$ | | 50 | | pF |
| Turn-ON Delay Time | $t_{d(on)}$ | See specified Test Circuit. | | 13 | | ns |
| Rise Time | t_r | " | | 40 | | ns |
| Turn-OFF Delay Time | $t_{d(off)}$ | " | | 95 | | ns |
| Fall Time | t_f | " | | 80 | | ns |
| Diode Forward Voltage | V_{SD} | $I_S=15A, V_{GS}=0$ | | 1.0 | 1.5 | V |

Switching Time Test Circuit





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