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| SANYO | No.3462A | 2SK1459 |
| | | N-Channel Silicon MOSFET Ultrahigh-Speed Switching Applications |

Features

- Low ON-state resistance.
- Ultrahigh-speed switching.
- Micaless package facilitating mounting.

Absolute Maximum Ratings at Ta = 25°C

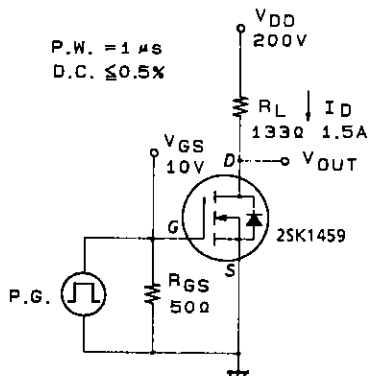
| | | | | |
|-----------------------------|-----------|----------------------------|-------------|----|
| Drain-to-Source Voltage | V_{DSS} | | 900 | V |
| Gate-to-Source Voltage | V_{GSS} | | ±30 | V |
| Drain Current(DC) | I_D | | 2.5 | A |
| Drain Current(Pulse) | I_{DP} | PW ≤ 10μs, duty cycle ≤ 1% | 5 | A |
| Allowable Power Dissipation | P_D | | 2.0 | W |
| | | $T_c = 25^\circ C$ | 30 | 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-Source Breakdown Voltage | $V_{(BR)DSS}$ | $I_D = 1mA, V_{GS} = 0$ | 900 | | | V |
| Zero-Gate Voltage Drain Current | I_{DSS} | $V_{DS} = 900V, V_{GS} = 0$ | | | 1.0 | mA |
| Gate-to-Source Leakage Current | I_{GSS} | $V_{GS} = \pm 30V, V_{DS} = 0$ | | | ±100 | nA |
| Cutoff Voltage | $V_{GS(off)}$ | $V_{DS} = 10V, I_D = 1mA$ | 2.0 | | 3.0 | V |
| Forward Transfer Admittance | $ Y_{fs} $ | $V_{DS} = 20V, I_D = 1.5A$ | 0.8 | 1.5 | | S |
| (Static Drain-to-Source ON-State Resistance | $R_{DS(on)}$ | $I_D = 1.5A, V_{GS} = 10V$ | | 4.7 | 6.0 | Ω |
| Input Capacitance | C_{iss} | $V_{DS} = 20V, f = 1MHz$ | | 350 | | pF |
| Output Capacitance | C_{oss} | $V_{DS} = 20V, f = 1MHz$ | | 150 | | pF |
| Reverse Transfer Capacitance | C_{rss} | $V_{DS} = 20V, f = 1MHz$ | | 100 | | pF |
| Turn-ON Delay Time | $t_{d(on)}$ | $I_D = 1.5A, V_{GS} = 10V$ $V_{DD} = 200V, R_{GS} = 50\Omega$ | | 15 | | ns |
| Rise Time | t_r | | 25 | | ns | |
| Turn-OFF Delay Time | $t_{d(off)}$ | | 120 | | ns | |
| Fall Time | t_f | | 40 | | ns | |
| Diode Forward Voltage | V_{SD} | | $I_S = 2.5A, V_{GS} = 0$ | | | 1.8 |

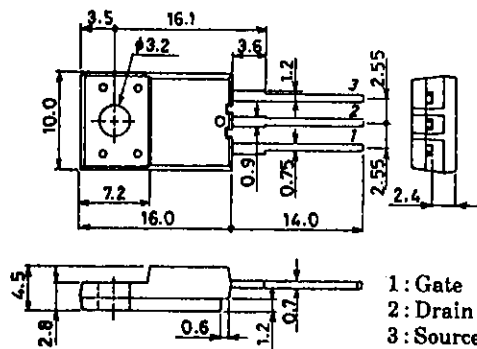
(Note) Be careful in handling the 2SK1459 because it has no protection diode between gate and source.

Switching Time Test Circuit



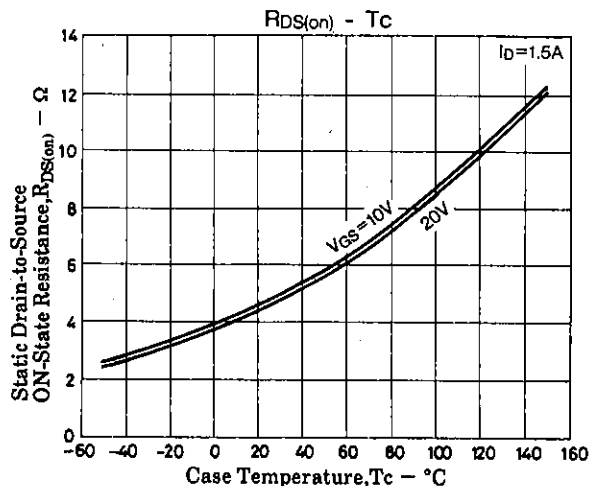
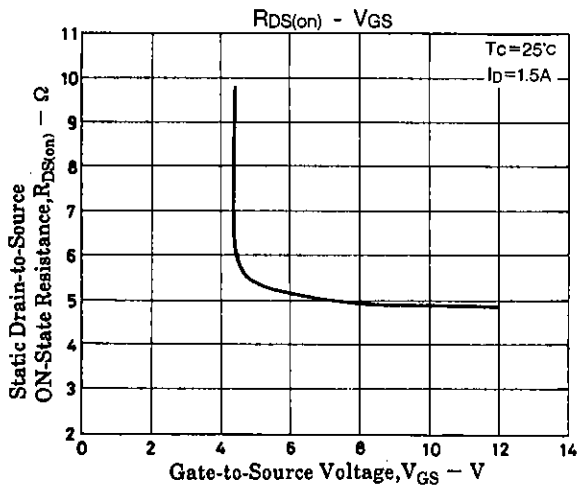
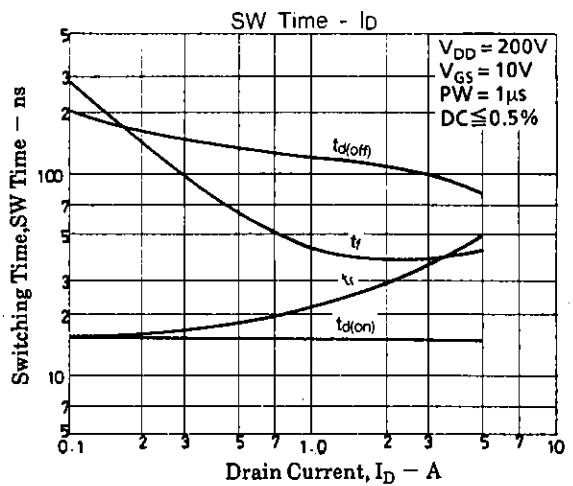
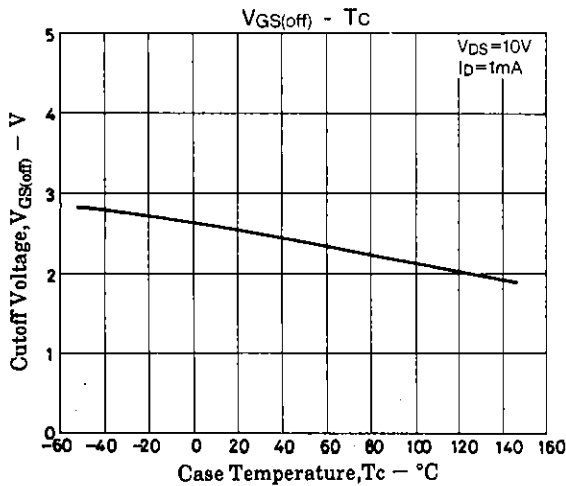
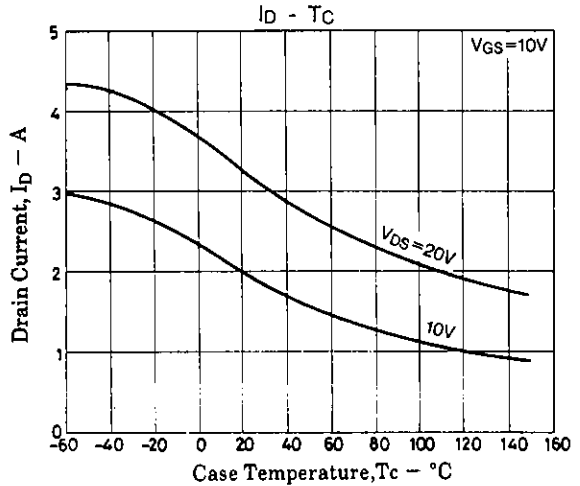
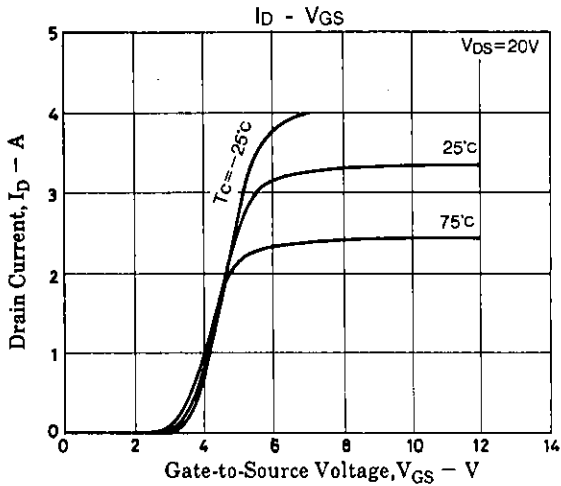
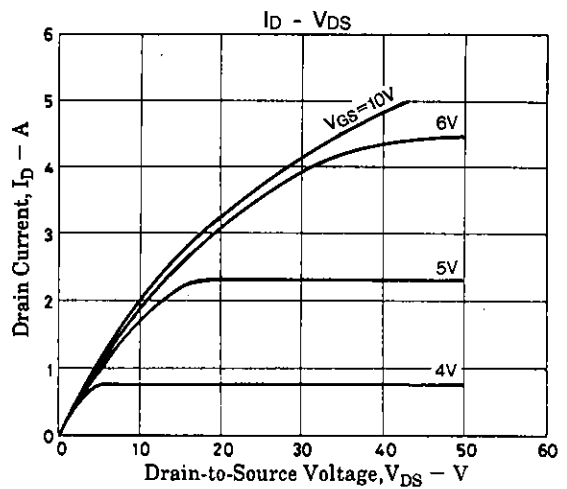
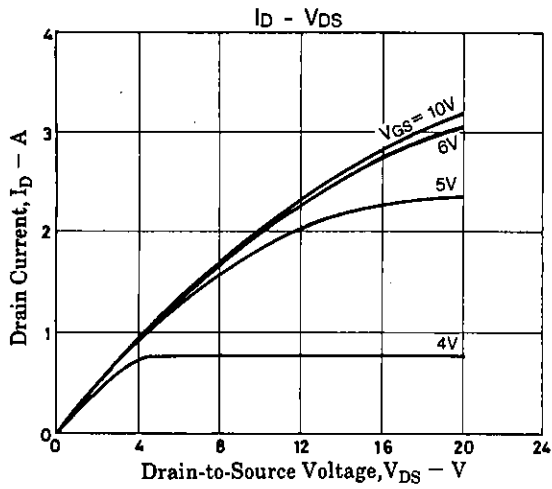
Package Dimensions 2078B

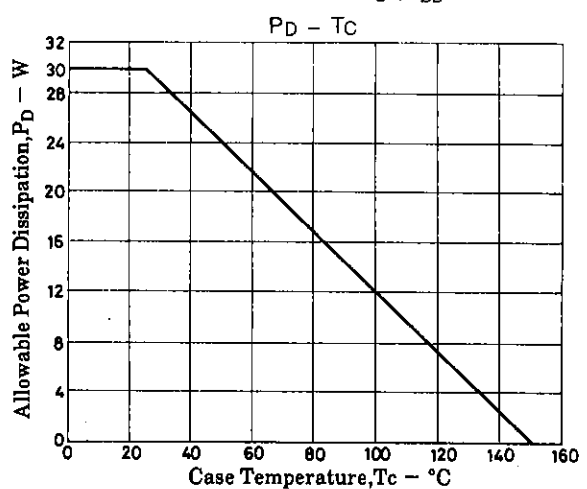
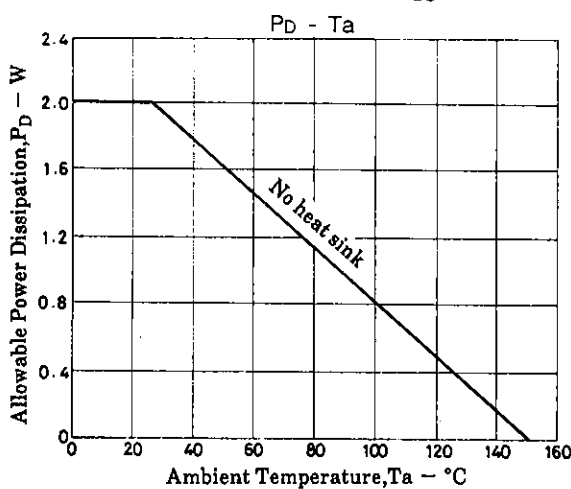
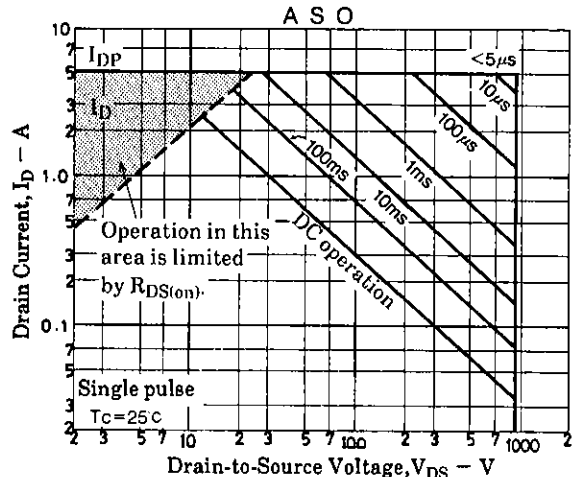
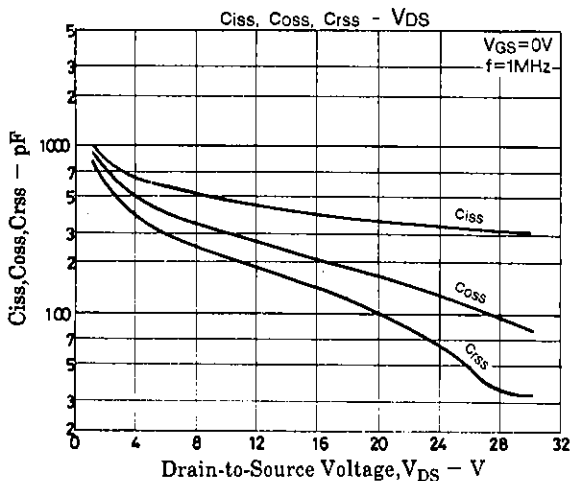
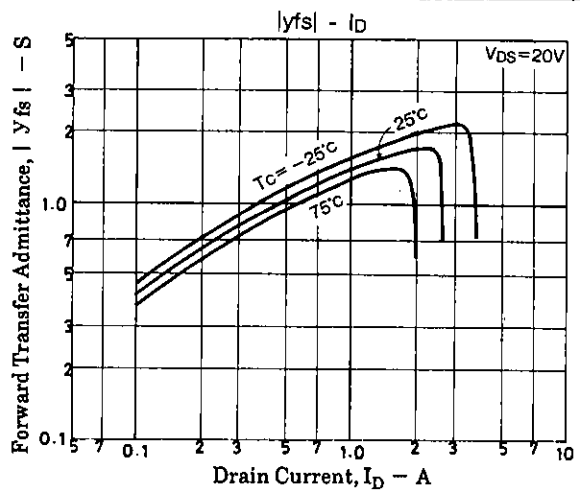
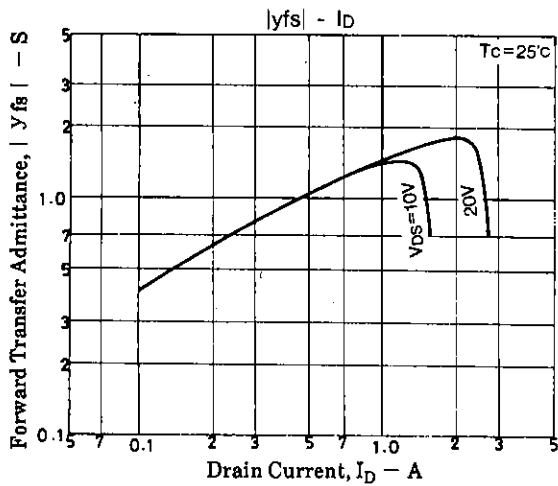
(unit : mm)



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