

|              |          |  |
|--------------|----------|--|
| <b>SANYO</b> | No.3771A | <b>2SK1470</b>   |
|              |          | N-Channel MOS Silicon FET<br>Very High-Speed<br>Switching Applications |

**Features**

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.

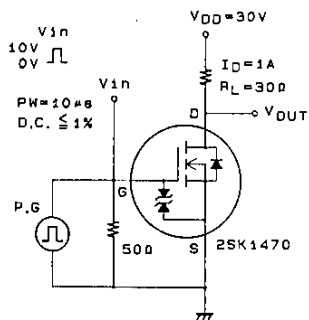
**Absolute Maximum Ratings at Ta = 25°C**

|                             |                  |  | unit  |
|-----------------------------|------------------|--|-------|
| Drain to Source Voltage     | V <sub>DSS</sub> | 60   | V     |
| Gate to Source Voltage      | V <sub>GS</sub>  | ± 15   | V     |
| Drain Current(DC)           | I <sub>D</sub>   | 2  | A     |
| Drain Current(Pulse)        | I <sub>DP</sub>  | PW ≤ 10 μs, duty cycle ≤ 1%                              | 8 A   |
| Allowable Power Dissipation | P <sub>D</sub>   | T <sub>c</sub> = 25°C                                    | 3.5 W |
|                             |                  | Mounted on ceramic board<br>(250mm <sup>2</sup> × 0.8mm) | 1.5 W |
| Channel Temperature         | T <sub>ch</sub>  | 150  | °C    |
| Storage Temperature         | T <sub>stg</sub> | - 55 to + 150  | °C    |

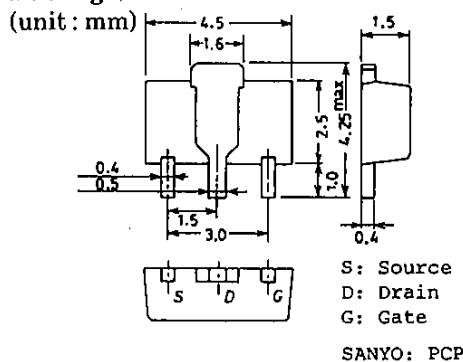
**Electrical Characteristics at Ta = 25°C**

|  |                      |  | min | typ  | max  | unit |
|--|----------------------|--|-----|------|------|------|
| D-S Breakdown Voltage                      | V <sub>(BR)DSS</sub> | I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0    | 60  |      |      | V    |
| Zero Gate Voltage Drain Current            | I <sub>DSS</sub>     | V <sub>DS</sub> = 60V, V <sub>GS</sub> = 0   |     |      | 100  | μA   |
| Gate to Source Leakage Current             | I <sub>GSS</sub>     | V <sub>GS</sub> = ± 12V, V <sub>DS</sub> = 0 |     |      | ± 10 | μA   |
| Cutoff Voltage                             | V <sub>GS(off)</sub> | V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA  | 1.0 |      | 2.0  | V    |
| Forward Transfer Admittance                | Y <sub>fs</sub>      | V <sub>DS</sub> = 10V, I <sub>D</sub> = 1A   | 1.2 | 2.0  |      | S    |
| Static Drain to Source on State Resistance | R <sub>DS(on)</sub>  | I <sub>D</sub> = 1A, V <sub>GS</sub> = 10V   |     | 0.35 | 0.45 | Ω    |
| Input Capacitance                          | C <sub>iss</sub>     | V <sub>DS</sub> = 20V, f = 1MHz              |     | 150  |      | pF   |
| Output Capacitance                         | C <sub>oss</sub>     | V <sub>DS</sub> = 20V, f = 1MHz              |     | 60   |      | pF   |
| Reverse Transfer Capacitance               | C <sub>rss</sub>     | V <sub>DS</sub> = 20V, f = 1MHz              |     | 12   |      | pF   |
| Turn-ON Delay Time                         | t <sub>d(on)</sub>   | See specified Test Circuit.                  |     | 6    |      | ns   |
| Rise Time                                  | t <sub>r</sub>       | "  |     | 10   |      | ns   |
| Turn-OFF Delay Time                        | t <sub>d(off)</sub>  | "  |     | 60   |      | ns   |
| Fall Time                                  | t <sub>f</sub>       | "  |     | 20   |      | ns   |
| Diode Forward Voltage                      | V <sub>SD</sub>      | I <sub>S</sub> = 2A, V <sub>GS</sub> = 0     |     | 1.0  |      | V    |

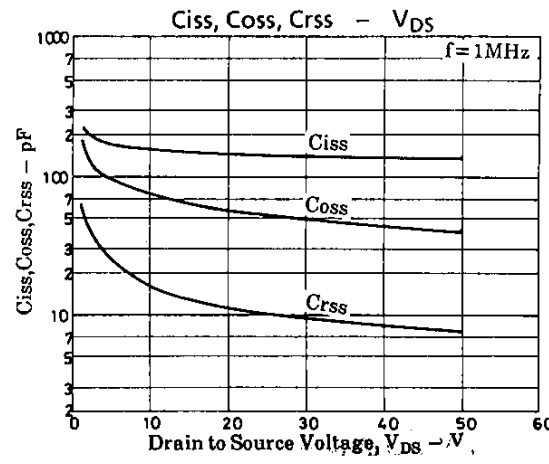
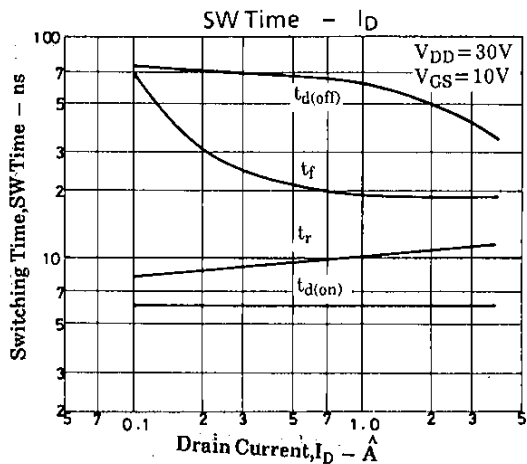
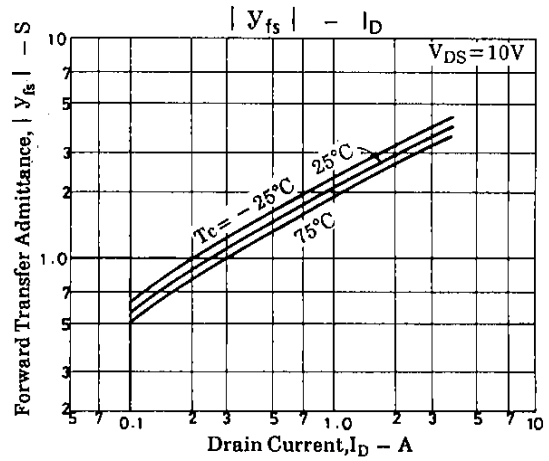
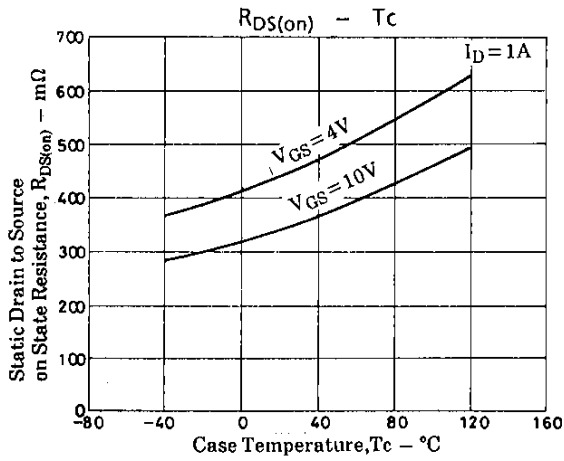
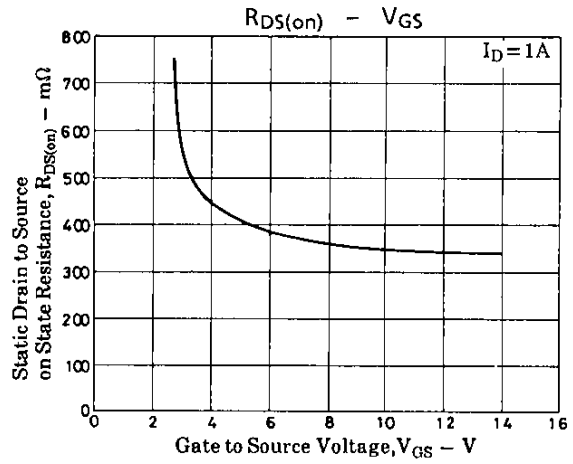
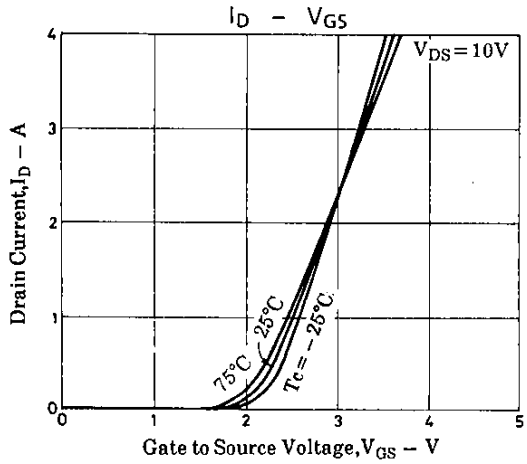
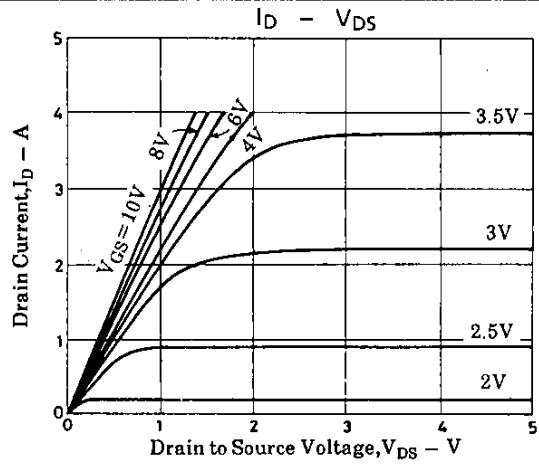
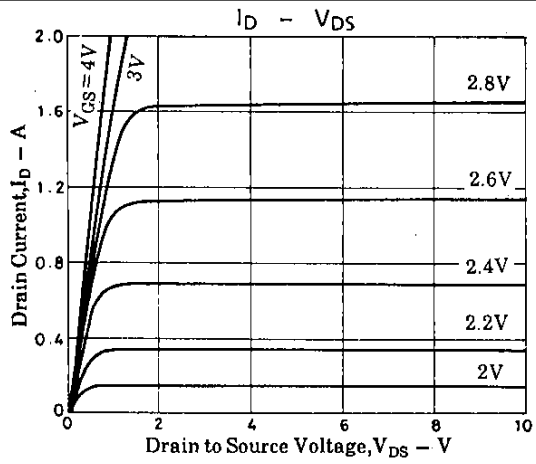
**Switching Time Test Circuit**

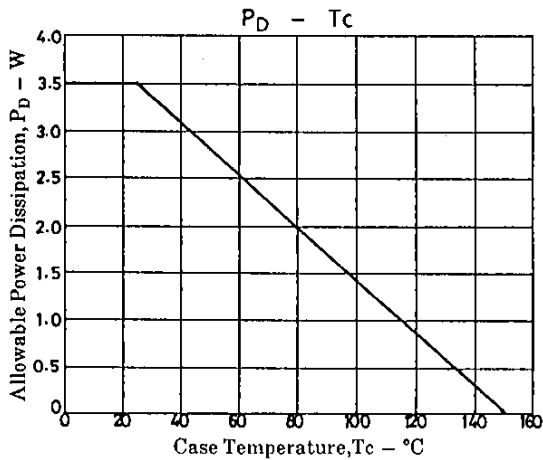
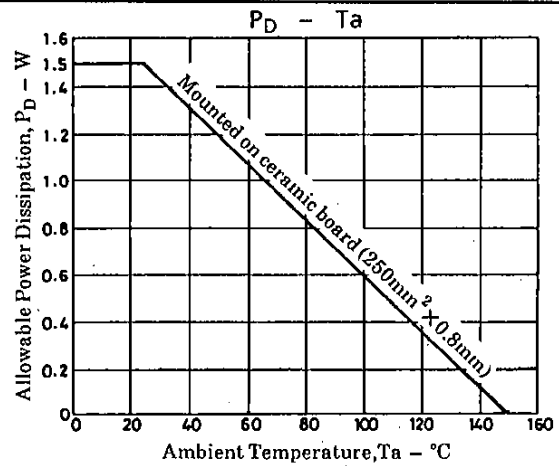
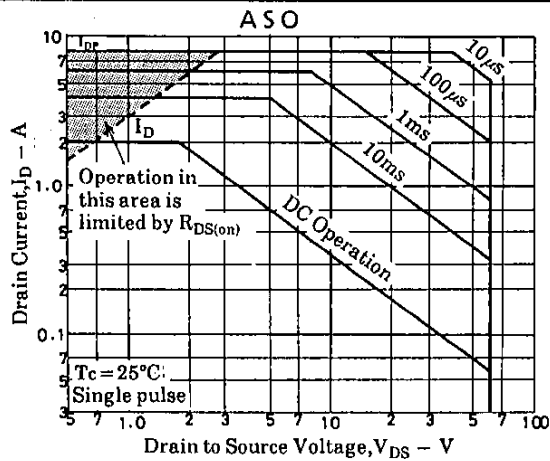


**Package Dimensions 2062**



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