

|              |         |  |
|--------------|---------|--|
| <b>SANYO</b> | No.3765 | <b>2SJ192</b>  |
|              |         | P-Channel MOS Silicon FET<br>Very High-Speed<br>Switching Applications |

**Features**

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

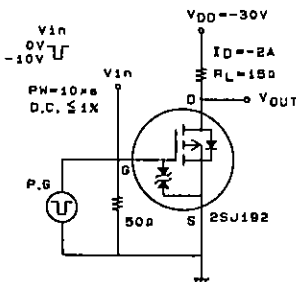
**Absolute Maximum Ratings at Ta = 25°C**

|                             |                  |                            | unit  |
|-----------------------------|------------------|----------------------------|-------|
| Drain to Source Voltage     | V <sub>DSS</sub> | -60                        | V     |
| Gate to Source Voltage      | V <sub>GSS</sub> | ±15                        | V     |
| Drain Current(DC)           | I <sub>D</sub>   | -4                         | A     |
| Drain Current(Pulse)        | I <sub>DP</sub>  | PW ≤ 10μs, duty cycle ≤ 1% | -16 A |
| Allowable Power Dissipation | P <sub>D</sub>   | T <sub>c</sub> = 25°C      | 30 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**

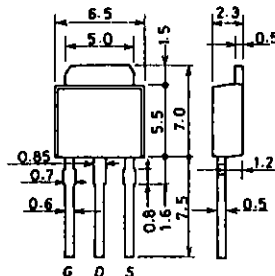
|  |                      |   | min  | typ  | max  | unit |
|--|----------------------|---|------|------|------|------|
| D-S Breakdown Voltage                      | V <sub>(BR)DSS</sub> | I <sub>D</sub> = -1mA, V <sub>GS</sub> = 0    | -60  |      |      | V    |
| G-S Breakdown Voltage                      | V <sub>(BR)GSS</sub> | I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0  | ±15  |      |      | 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> = -2A  | 2.5  | 4    |      | S    |
| Static Drain to Source on State Resistance | R <sub>DS(on)</sub>  | I <sub>D</sub> = -2A, V <sub>GS</sub> = -10V  |      | 0.15 | 0.2  | Ω    |
| Input Capacitance                          | C <sub>iss</sub>     | V <sub>DS</sub> = -20V, f = 1MHz              |      | 950  |      | pF   |
| Output Capacitance                         | C <sub>oss</sub>     | V <sub>DS</sub> = -20V, f = 1MHz              |      | 300  |      | pF   |
| Reverse Transfer Capacitance               | C <sub>rss</sub>     | V <sub>DS</sub> = -20V, f = 1MHz              |      | 75   |      | pF   |
| Turn-ON Delay Time                         | t <sub>d(on)</sub>   | See specified Test Circuit                    |      | 15   |      | ns   |
| Rise Time                                  | t <sub>r</sub>       | "   |      | 35   |      | ns   |
| Turn-OFF Delay Time                        | t <sub>d(off)</sub>  | "   |      | 115  |      | ns   |
| Fall Time                                  | t <sub>f</sub>       | "   |      | 95   |      | ns   |
| Diode Forward Voltage                      | V <sub>SD</sub>      | I <sub>S</sub> = -4A, V <sub>GS</sub> = 0     | -1.0 | -1.5 |      | V    |

**Switching Time Test Circuit**



**Package Dimensions 2083A**

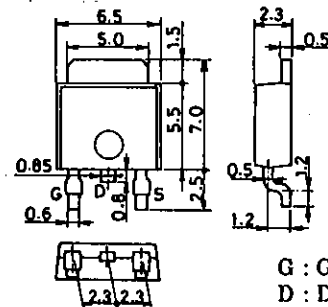
(unit: mm)



G : Gate  
D : Drain  
S : Source  
SANYO : TP

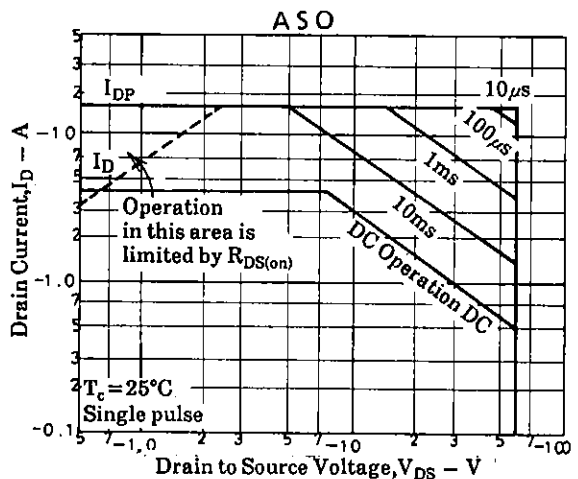
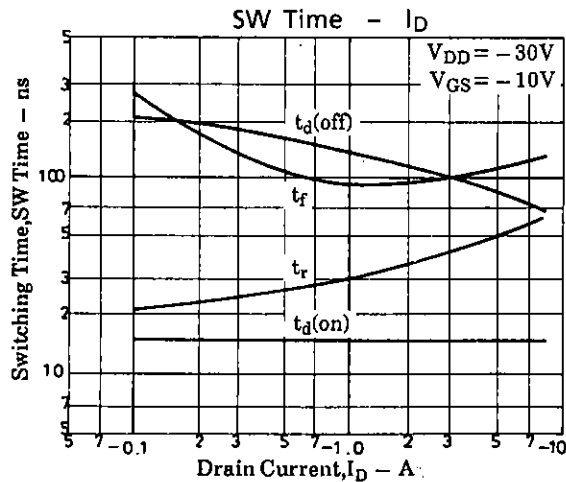
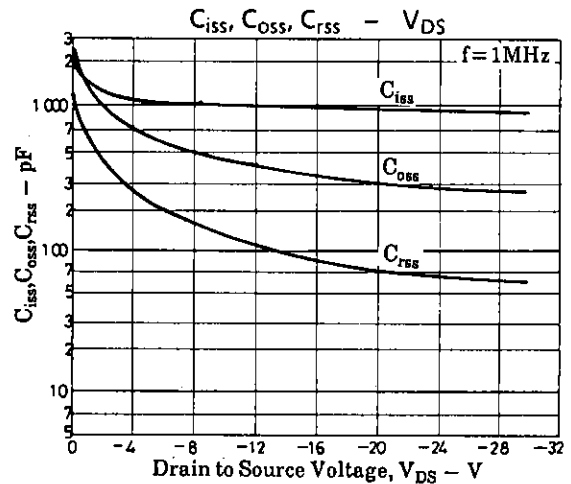
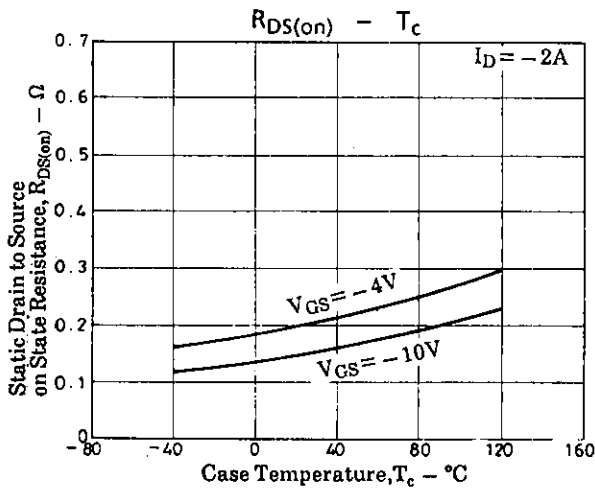
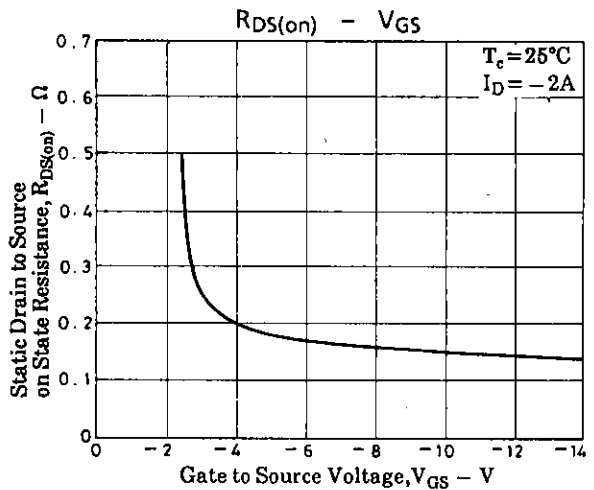
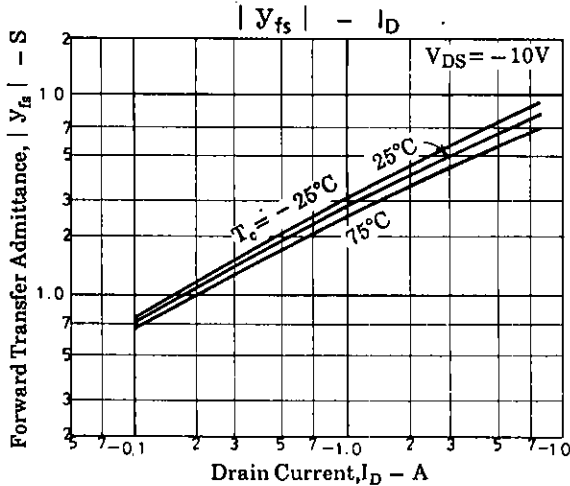
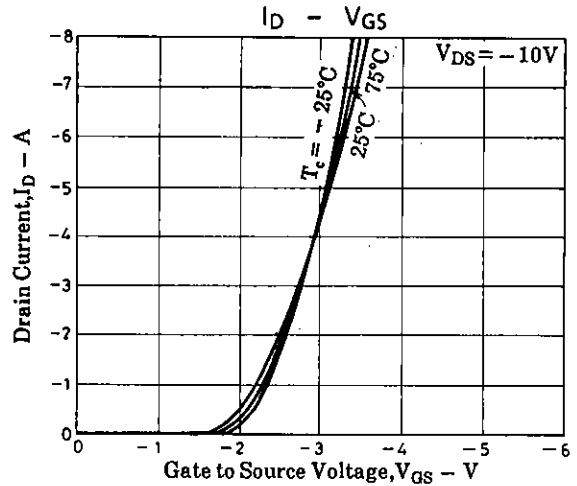
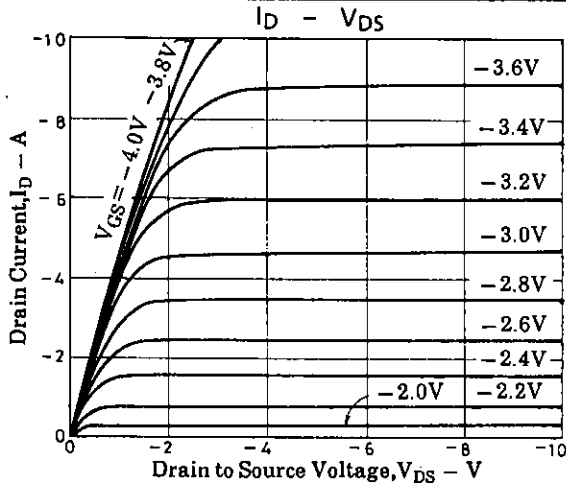
**Package Dimensions 2092A**

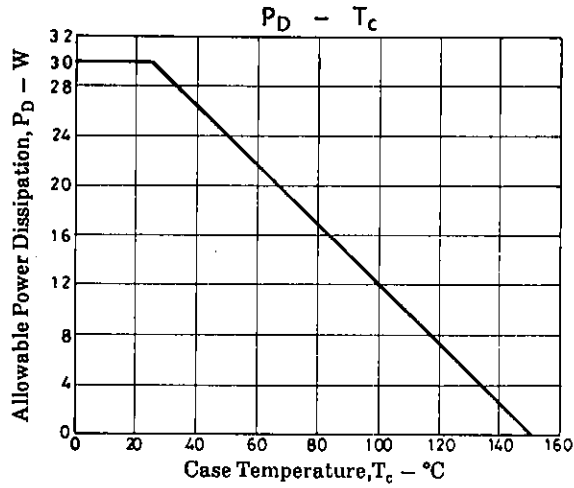
(unit: mm)



G : Gate  
D : Drain  
S : Source

SANYO : TP - FA





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