



No.3818

**2SJ233**

P-Channel MOS Silicon FET

Very High-Speed  
Switching Applications**Features**

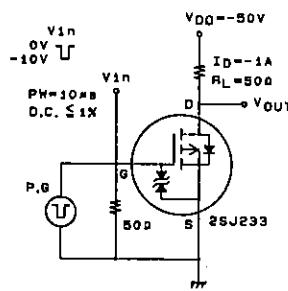
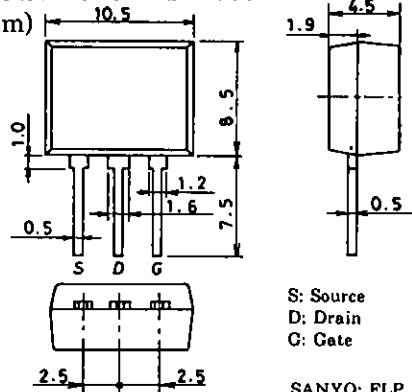
- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Its height onboard is 9.5mm.
- Meets radial taping.

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

|                             |                  |                        | unit   |
|-----------------------------|------------------|------------------------|--------|
| Drain to Source Voltage     | V <sub>DSS</sub> | -100                   | V      |
| Gate to Source Voltage      | V <sub>GSS</sub> | ±15                    | V      |
| Drain Current(DC)           | I <sub>D</sub>   | -1.8                   | A      |
| Drain Current(Pulse)        | I <sub>DP</sub>  | PW≤10μs, duty cycle≤1% | -7.2 A |
| Allowable Power Dissipation | P <sub>D</sub>   |                        | 1.5 W  |
| Channel Temperature         | T <sub>ch</sub>  |                        | 150 °C |
| Storage Temperature         | T <sub>tsg</sub> | -55 to +150            | °C     |

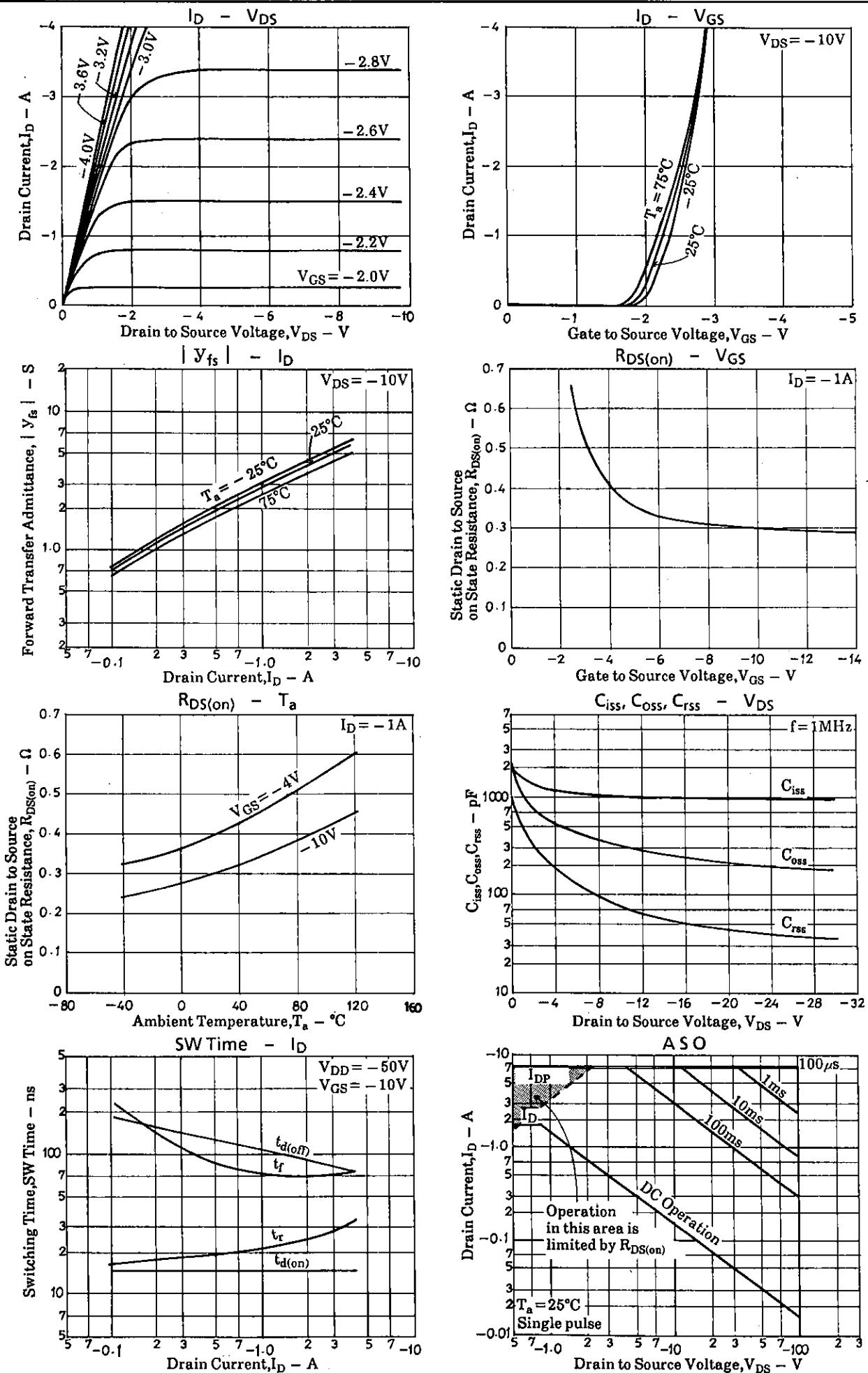
**Electrical Characteristics at Ta = 25°C**

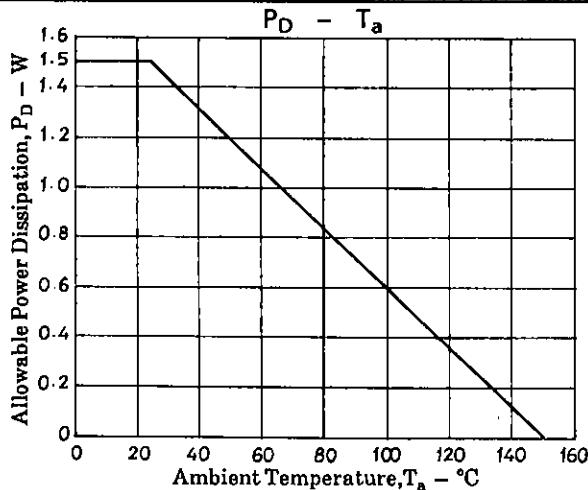
|  |                      |   | min  | typ  | max  | unit |
|--|----------------------|---|------|------|------|------|
| D-S Breakdown Voltage                      | V <sub>(BR)DSS</sub> | I <sub>D</sub> = -1mA, V <sub>GS</sub> = 0    | -100 |      |      | V    |
| G-S Breakdown Voltage                      | V <sub>(BR)GSS</sub> | I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0  | ±15  |      |      | V    |
| Zero Gate Voltage                          | I <sub>DSS</sub>     | V <sub>DS</sub> = -100V, V <sub>GS</sub> = 0  |      |      | -100 | μA   |
| Drain Current                              |                      |   |      |      |      |      |
| 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  | 1.8  | 2.8  |      | S    |
| Static Drain to Source on State Resistance | R <sub>DS(on)</sub>  | I <sub>D</sub> = -1A, V <sub>GS</sub> = -10V  | 0.3  | 0.4  |      | Ω    |
| Input Capacitance                          | C <sub>iss</sub>     | I <sub>D</sub> = -1A, V <sub>GS</sub> = -4V   | 0.4  | 0.55 |      | Ω    |
| Output Capacitance                         | C <sub>oss</sub>     | V <sub>DS</sub> = -20V, f = 1MHz              | 950  |      |      | pF   |
| Reverse Transfer Capacitance               | C <sub>rss</sub>     | V <sub>DS</sub> = -20V, f = 1MHz              | 200  |      |      | pF   |
| Turn-ON Delay Time                         | t <sub>d(on)</sub>   | V <sub>DS</sub> = -20V, f = 1MHz              | 40   |      |      | pF   |
| Rise Time                                  | t <sub>r</sub>       | See specified Test Circuit.                   | 15   |      |      | ns   |
| Turn-OFF Delay Time                        | t <sub>d(off)</sub>  | "   | 22   |      |      | ns   |
| Fall Time                                  | t <sub>f</sub>       | "   | 110  |      |      | ns   |
| Diode Forward Voltage                      | V <sub>SD</sub>      | I <sub>S</sub> = -1.8A, V <sub>GS</sub> = 0   | -1.0 | -1.5 |      | V    |

**Switching Time Test Circuit****Package Dimensions 2085**  
(unit : mm)

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