

**SANYO**

No.3770A

**2SK1469**

N-Channel MOS Silicon FET

Very High-Speed  
Switching Applications**Features**

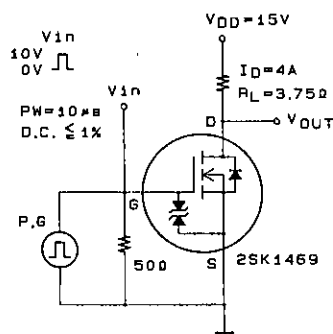
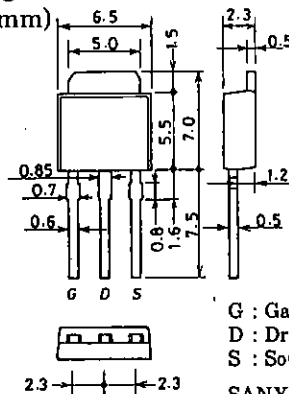
- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.

**Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

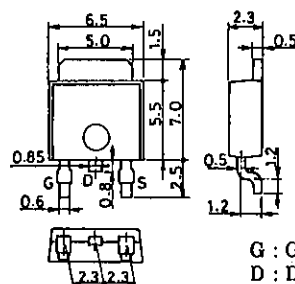
|                             |           |                                           | unit             |
|-----------------------------|-----------|-------------------------------------------|------------------|
| Drain to Source Voltage     | $V_{DS}$  | 30                                        | V                |
| Gate to Source Voltage      | $V_{GS}$  | $\pm 15$                                  | V                |
| Drain Current(DC)           | $I_D$     | 8                                         | A                |
| Drain Current(Pulse)        | $I_{DP}$  | $PW \leq 10\mu s$ , duty cycle $\leq 1\%$ | 32 A             |
| Allowable Power Dissipation | $P_D$     | 1.0                                       | W                |
|                             |           | $T_c = 25^\circ\text{C}$                  | 30 W             |
| Channel Temperature         | $T_{ch}$  | 150                                       | $^\circ\text{C}$ |
| Storage Temperature         | $T_{stg}$ | -55 to +150                               | $^\circ\text{C}$ |

**Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

|                                            |               |                                         | min      | typ  | max      | unit      |
|--------------------------------------------|---------------|-----------------------------------------|----------|------|----------|-----------|
| D-S Breakdown Voltage                      | $V_{(BR)DSS}$ | $I_D = 1\text{mA}, V_{GS} = 0$          | 30       |      |          | V         |
| G-S Breakdown Voltage                      | $V_{(BR)GSS}$ | $I_G = \pm 100\mu A, V_{DS} = 0$        | $\pm 15$ |      |          | V         |
| Zero Gate Voltage Drain Current            | $I_{DSS}$     | $V_{DS} = 30\text{V}, V_{GS} = 0$       |          |      | 100      | $\mu A$   |
| Gate to Source Leakage Current             | $I_{GSS}$     | $V_{GS} = \pm 12\text{V}, V_{DS} = 0$   |          |      | $\pm 10$ | $\mu A$   |
| Cutoff Voltage                             | $V_{GS(off)}$ | $V_{DS} = 10\text{V}, I_D = 1\text{mA}$ | 1.0      |      | 2.0      | V         |
| Forward Transfer Admittance                | $ Y_{fs} $    | $V_{DS} = 10\text{V}, I_D = 4\text{A}$  | 5        | 8    |          | S         |
| Static Drain to Source on State Resistance | $R_{DS(on)}$  | $I_D = 4\text{A}, V_{GS} = 10\text{V}$  |          | 40   | 55       | $m\Omega$ |
|                                            | $R_{DS(on)}$  | $I_D = 4\text{A}, V_{GS} = 4\text{V}$   |          | 55   | 75       | $m\Omega$ |
| Input Capacitance                          | $C_{iss}$     | $V_{DS} = 10\text{V}, f = 1\text{MHz}$  |          | 1000 |          | pF        |
| Output Capacitance                         | $C_{oss}$     | $V_{DS} = 10\text{V}, f = 1\text{MHz}$  |          | 550  |          | pF        |
| Reverse Transfer Capacitance               | $C_{rss}$     | $V_{DS} = 10\text{V}, f = 1\text{MHz}$  |          | 180  |          | pF        |
| Turn-ON Delay Time                         | $t_{d(on)}$   | See specified Test Circuit.             |          | 13   |          | ns        |
| Rise Time                                  | $t_r$         | "                                       |          | 40   |          | ns        |
| Turn-OFF Delay Time                        | $t_{d(off)}$  | "                                       |          | 130  |          | ns        |
| Fall Time                                  | $t_f$         | "                                       |          | 120  |          | ns        |
| Diode Forward Voltage                      | $V_{SD}$      | $I_S = 8\text{A}, V_{GS} = 0$           | 1.0      | 1.5  |          | V         |

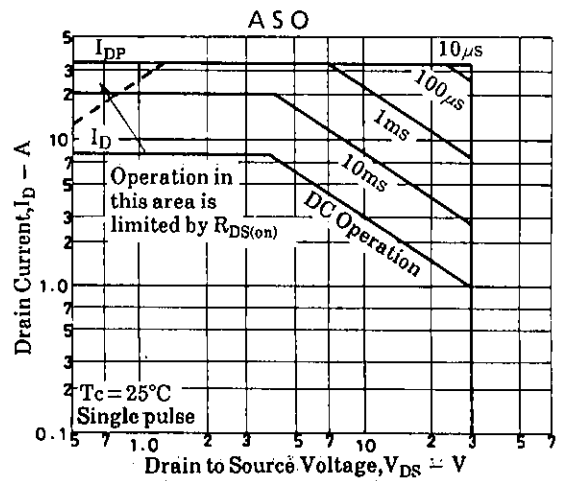
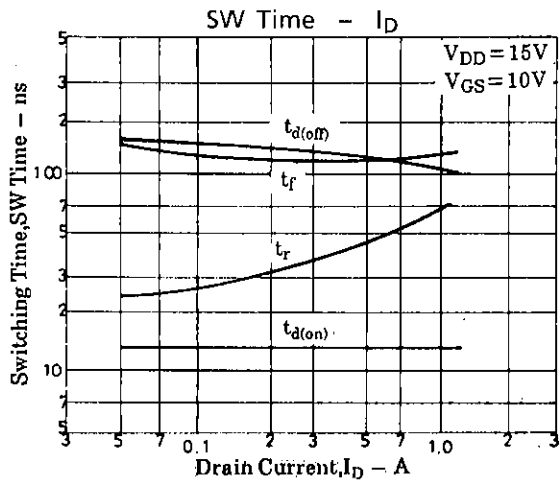
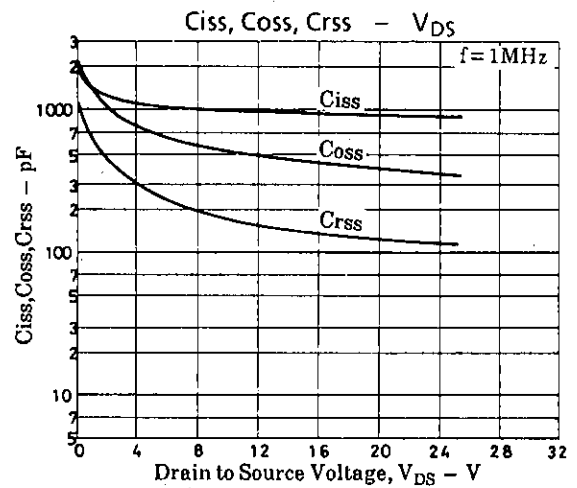
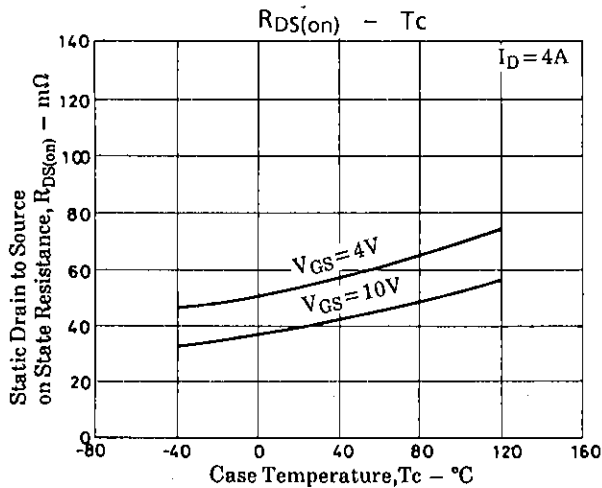
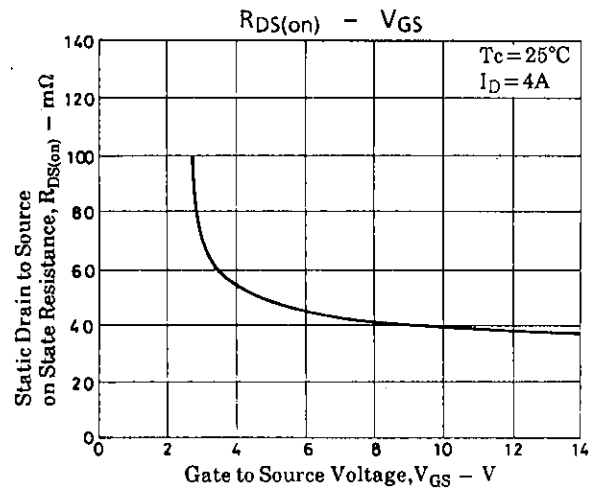
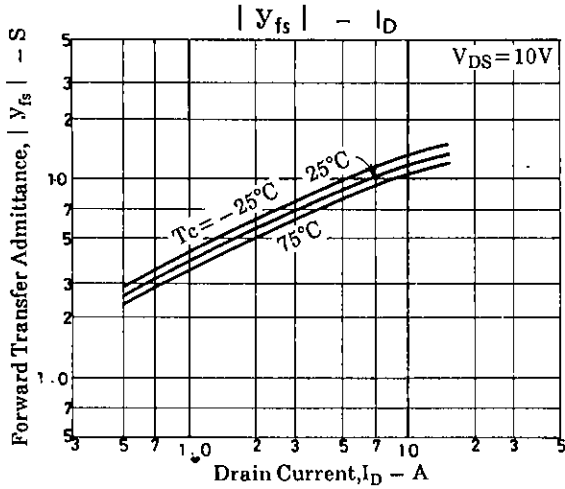
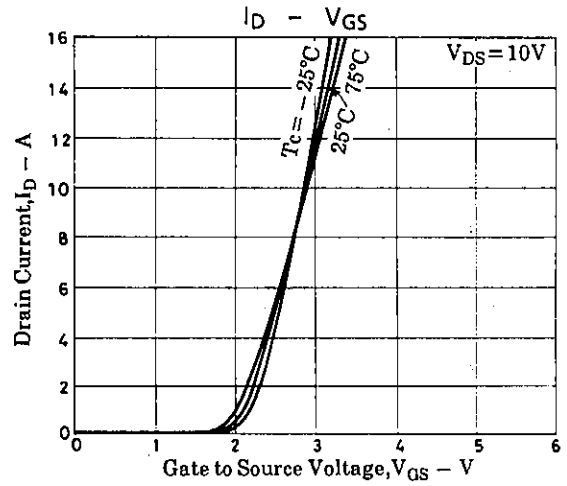
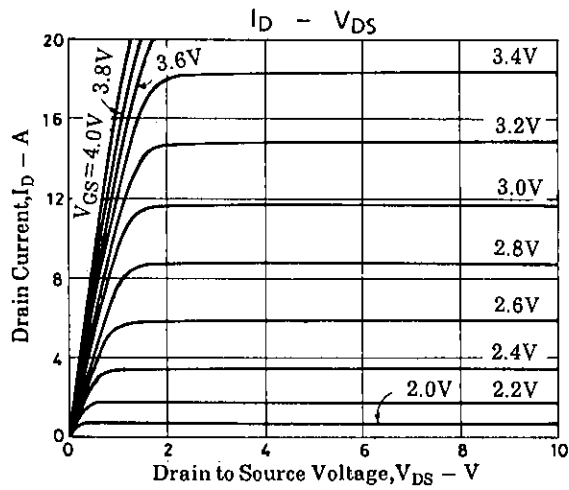
**Switching Time Test Circuit****Package Dimensions 2083A (unit: mm)**

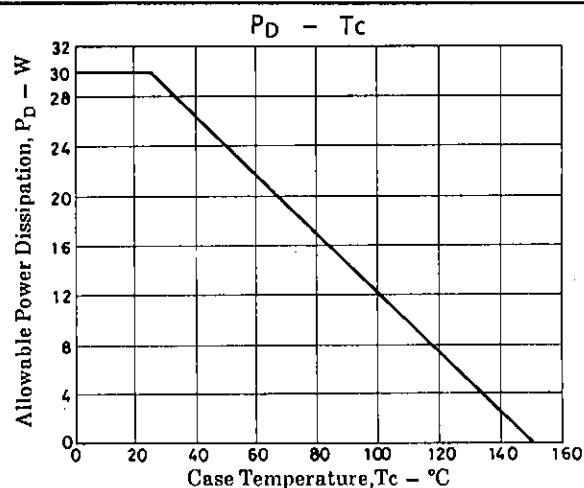
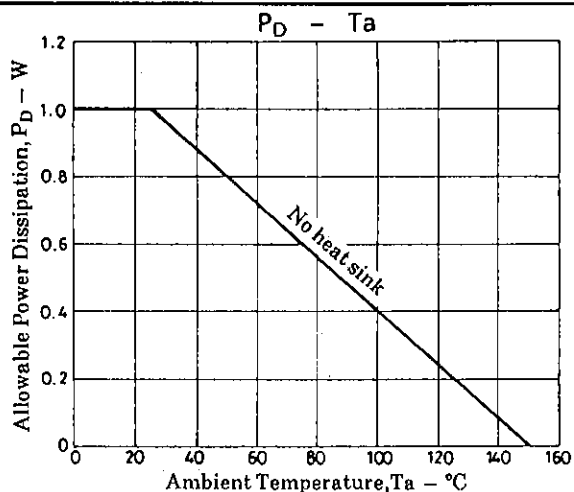
G : Gate  
D : Drain  
S : Source  
SANYO : TP

**Package Dimensions 2092A (unit: mm)**

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

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