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| SANYO | No.4630 | 2SK2046 |
| | | 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 Ta = 25°C

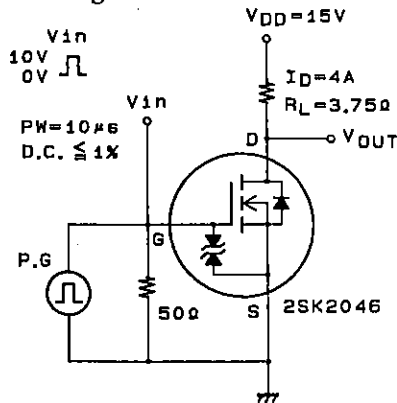
| | | | unit |
|-----------------------------|------------------|-------------|------|
| Drain-to-Source Voltage | V _{DSS} | 30 | V |
| Gate-to-Source Voltage | V _{GSS} | ±15 | V |
| Drain Current (DC) | I _D | 12 | A |
| Drain Current (Pulse) | I _{DP} | 48 | A |
| Allowable Power Dissipation | P _D | 30 | W |
| Channel Temperature | T _{ch} | 150 | °C |
| Storage Temperature | T _{stg} | -55 to +150 | °C |

PW ≤ 10 μs, duty cycle ≤ 1%
Tc = 25°C

Electrical Characteristics at Ta = 25°C

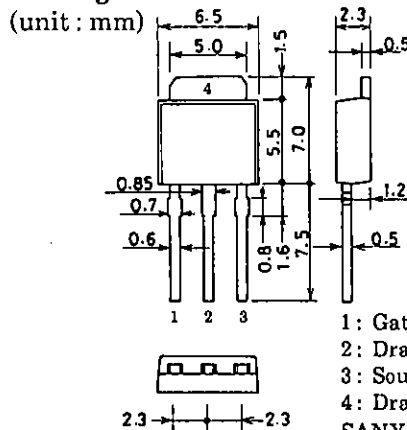
| | | | min | typ | max | unit |
|---|----------------------|---|-----|------|-----|------|
| D-S Breakdown Voltage | V _{(BR)DSS} | I _D = 1mA, V _{GS} = 0 | 30 | | | V |
| G-S Breakdown Voltage | V _{(BR)GSS} | I _G = ±100 μA, V _{DS} = 0 | ±15 | | | V |
| Zero Gate Voltage Drain Current | I _{DSS} | V _{DS} = 30V, V _{GS} = 0 | | | 100 | μA |
| Gate-to-Source Leakage Current | I _{GSS} | V _{GS} = ±12V, V _{DS} = 0 | | | ±10 | μA |
| Cutoff Voltage | V _{GS(off)} | V _{DS} = 10V, I _D = 1mA | 1.0 | | 2.0 | V |
| Forward Transfer Admittance | Y _{fs} | V _{DS} = 10V, I _D = 4A | 5 | 8 | | S |
| Static Drain-to-Source on State Resistance | R _{DS(on)} | I _D = 4A, V _{GS} = 10V | 24 | 35 | 50 | mΩ |
| | R _{DS(on)} | I _D = 4A, V _{GS} = 4V | | 50 | 70 | mΩ |
| Input Capacitance | C _{iss} | V _{DS} = 10V, f = 1MHz | | 1000 | | pF |
| Output Capacitance | C _{oss} | V _{DS} = 10V, f = 1MHz | | 550 | | pF |
| Reverse Transfer Capacitance | C _{rss} | V _{DS} = 10V, f = 1MHz | | 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 = 8A, V _{GS} = 0 | | 1.0 | 1.5 | V |
| Drain Current | I _{DSX} | V _{DS} = 5V, V _{GS} = 0.1V | | | 0.5 | μA |

Switching Time Test Circuit



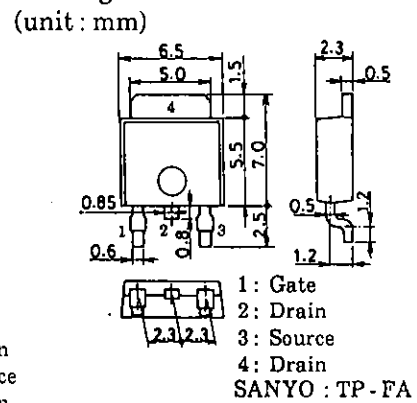
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Package Dimensions 2083B

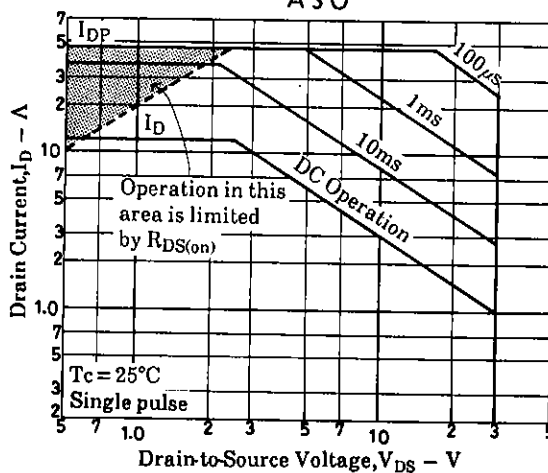
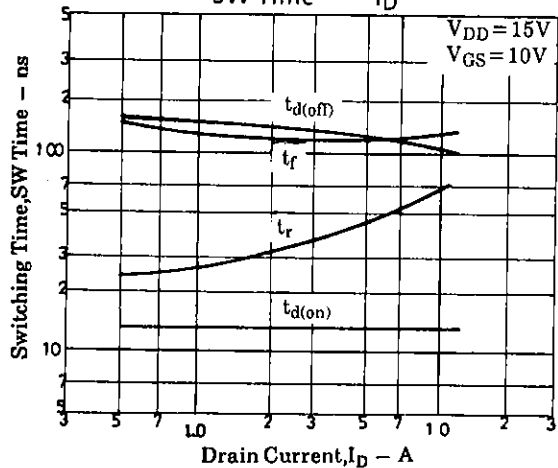
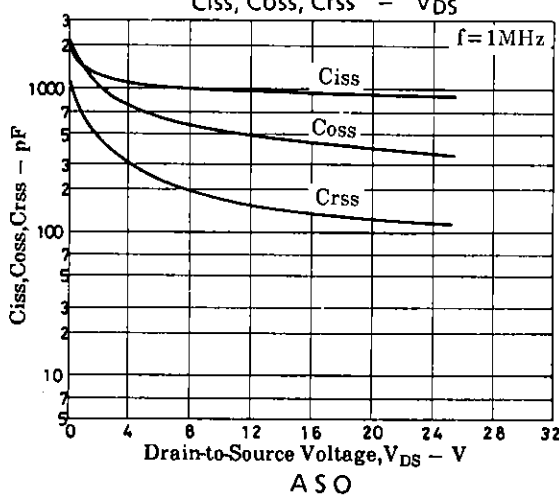
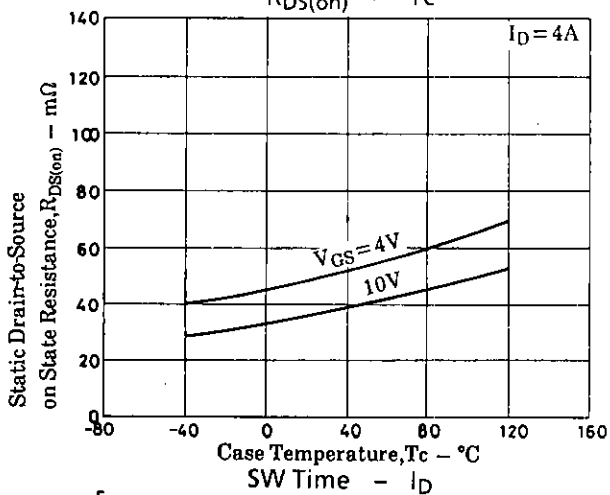
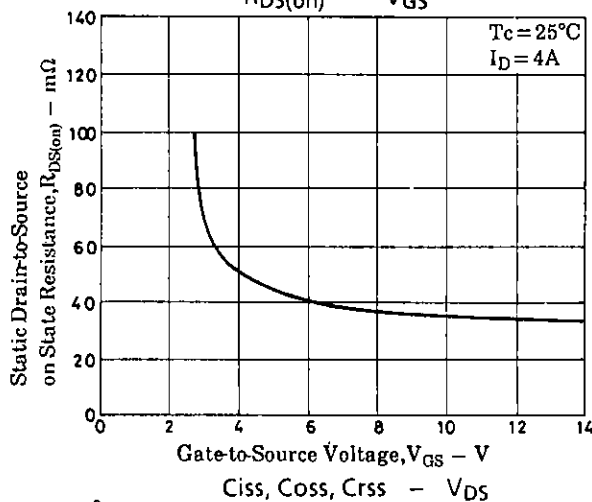
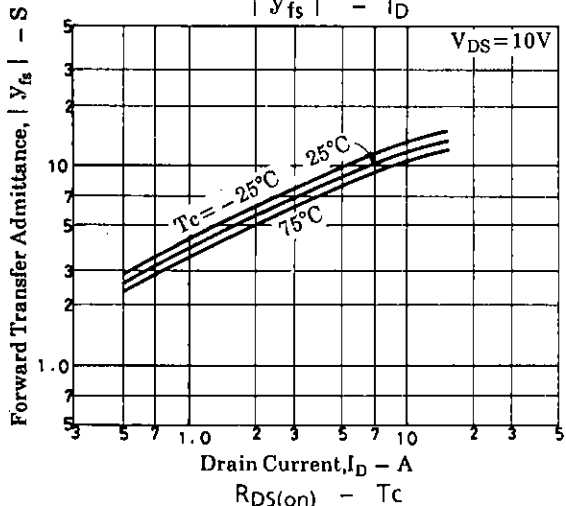
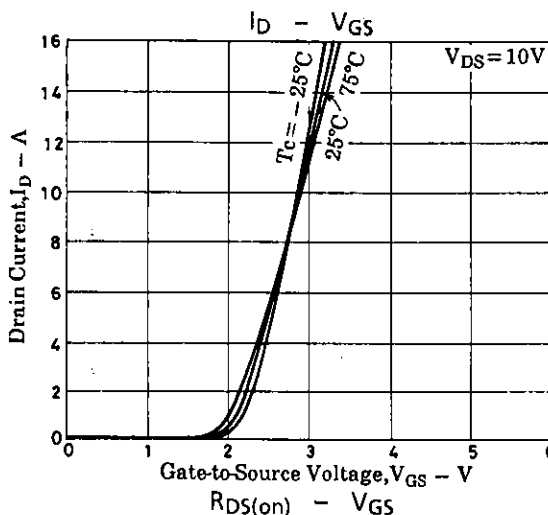
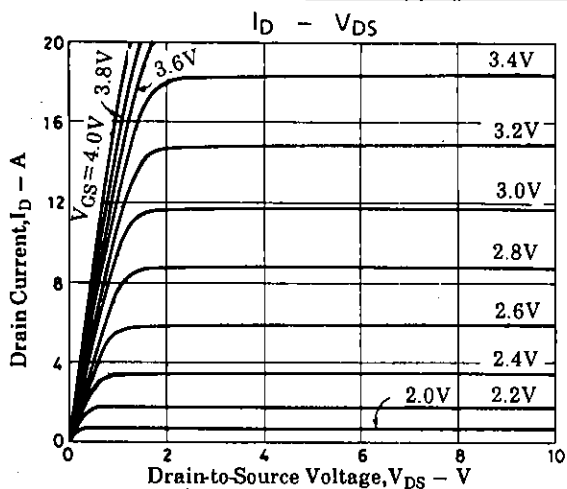


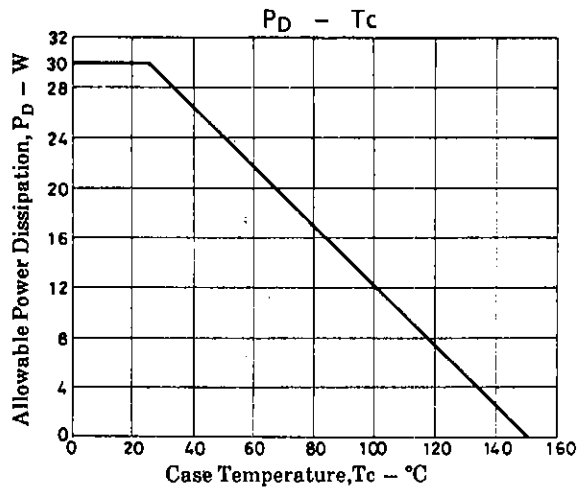
1: Gate
2: Drain
3: Source
4: Drain
SANYO : TP

Package Dimensions 2092B



1: Gate
2: Drain
3: Source
4: Drain
SANYO : TP-FA





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