



No.3764A

2 SJ 191

## P-Channel MOS Silicon FET

## Very High-Speed Switching Applications

### Features

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

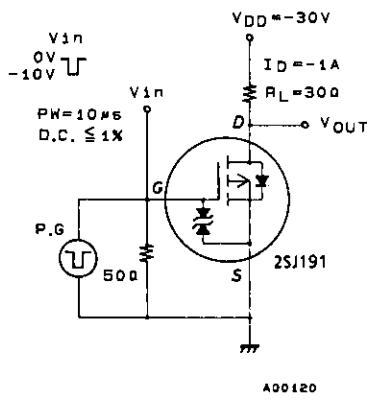
#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$		unit
Drain to Source Voltage	$V_{DSS}$	-60 V
Gate to Source Voltage	$V_{GSS}$	$\pm 15$ V
Drain Current (DC)	$I_D$	-2 A
Drain Current (Pulse)	$I_{DP}$	PW $\leq 10\ \mu\text{s}$ , duty cycle $\leq 1\%$ -8 A
Allowable Power Dissipation	$P_D$	$T_c = 25^\circ\text{C}$ 20 W
Channel Temperature	$T_{ch}$	150 $^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150 $^\circ\text{C}$

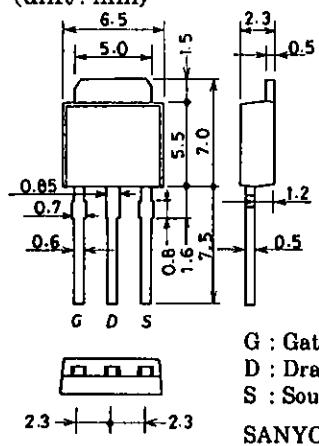
### Electrical Characteristics at Ta = 25°C

Electrical Characteristics at $T_A = 25^\circ C$		Min	Typ	Max	Unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}, V_{GS} = 0$	-60		V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}, V_{DS} = 0$	$\pm 15$		V
Zero Gate Voltage	$I_{DSS}$	$V_{DS} = -60\text{V}, V_{GS} = 0$		-100	$\mu\text{A}$
Drain Current					
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12\text{V}, V_{DS} = 0$		$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(\text{off})}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	-1.0	-2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}, I_D = -1\text{A}$	1.2	2	S
Static Drain to Source	$R_{DS(\text{on})}$	$I_D = -1\text{A}, V_{GS} = -10\text{V}$	0.35	0.45	$\Omega$
On State Resistance	$R_{DS(\text{on})}$	$I_D = -1\text{A}, V_{GS} = -4\text{V}$	0.45	0.6	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -20\text{V}, f = 1\text{MHz}$	380		pF
Output Capacitance	$C_{oss}$	$V_{DS} = -20\text{V}, f = 1\text{MHz}$	150		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -20\text{V}, f = 1\text{MHz}$	40		pF
Turn-ON Delay Time	$t_{d(\text{on})}$	See specified Test Circuit	12		ns
Rise Time	$t_r$	"	18		ns
Turn-OFF Delay Time	$t_{d(\text{off})}$	"	85		ns
Fall Time	$t_f$	"	55		ns
Diode Forward Voltage	$V_{SD}$	$I_S = -2\text{A}, V_{GS} = 0$	-1.0	-1.5	V

## Switching Time Test Circuit

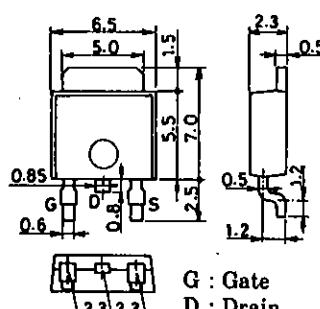


**Package Dimensions 2083A**  
(unit : mm)



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

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

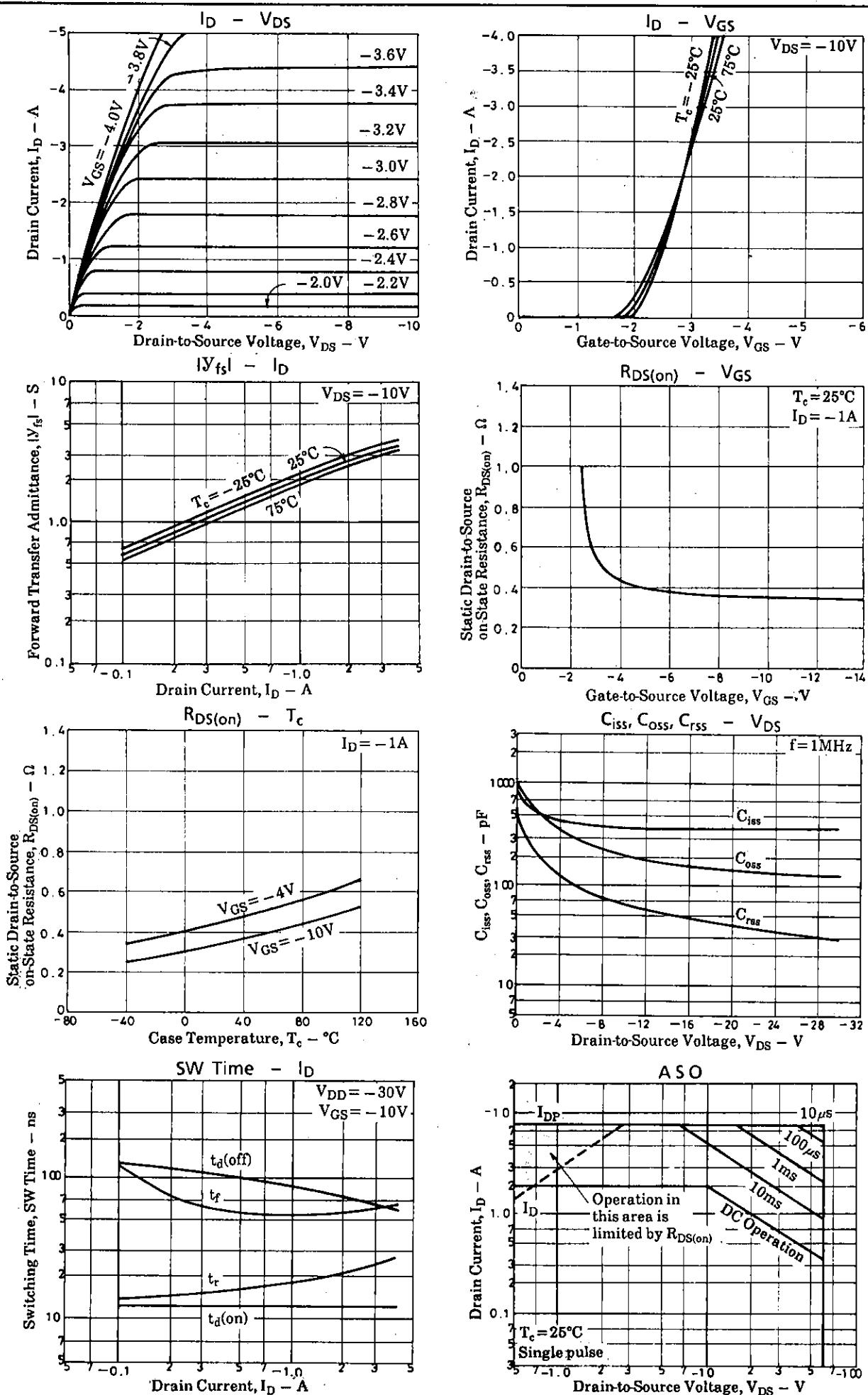


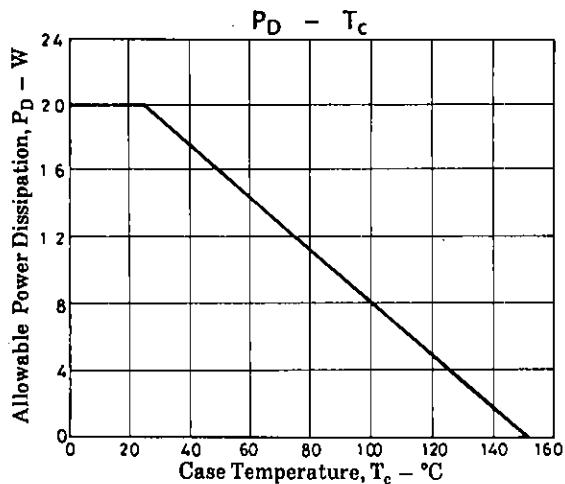
G : Gate  
D : Drain  
S : Source

SANYO : TP-FA

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