

**SANYO**

No.4206

**2SK1891**

N-Channel MOS Silicon FET

Very High-Speed  
Switching Applications**Features**

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Surface mount type device making the following possible.
  - Reduction in the number of manufacturing processes for 2SK1891-applied equipment.
  - High density surface mount applications.
  - Small size of 2SK1891-applied equipment.

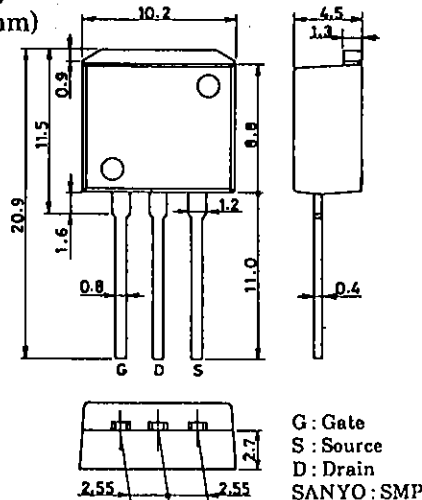
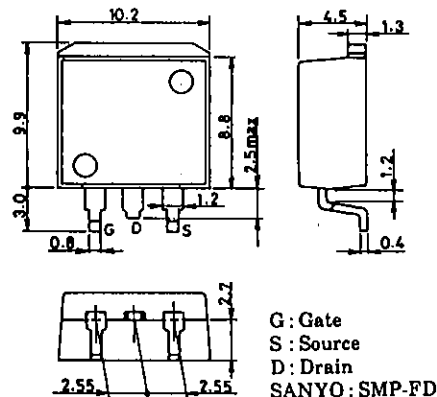
**Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

			unit
Drain to Source Voltage	$V_{DS}$	30	V
Gate to Source Voltage	$V_{GS}$	$\pm 15$	V
Drain Current(DC)	$I_D$	35	A
Drain Current(Pulse)	$I_{DP}$	$PW \leq 10\mu\text{s}, \text{duty cycle} \leq 1\%$	140
Allowable Power Dissipation	$P_D$	1.65	W
		$T_c = 25^\circ\text{C}$	70
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	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}, V_{DS} = 0$	$\pm 15$			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 30\text{V}, V_{GS} = 0$			100	$\mu\text{A}$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12\text{V}, V_{DS} = 0$			$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}, I_D = 18\text{A}$	17.5	29		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 18\text{A}, V_{GS} = 10\text{V}$		15	25	$\text{m}\Omega$
	$R_{DS(on)}$	$I_D = 18\text{A}, V_{GS} = 4\text{V}$		25	35	$\text{m}\Omega$

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**Package Dimensions 2093**  
(unit: mm)**Package Dimensions 2090**  
(unit: mm)

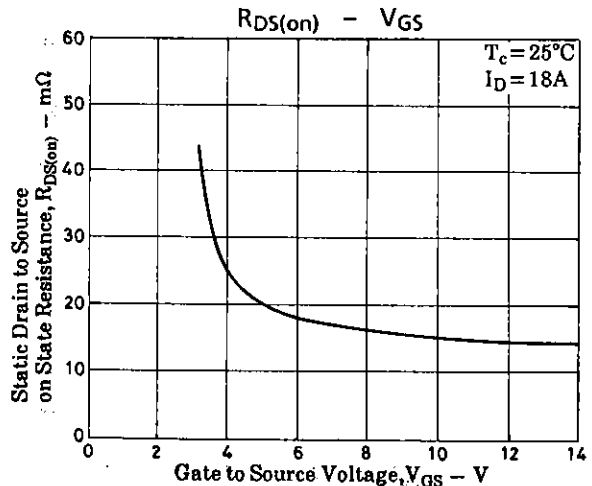
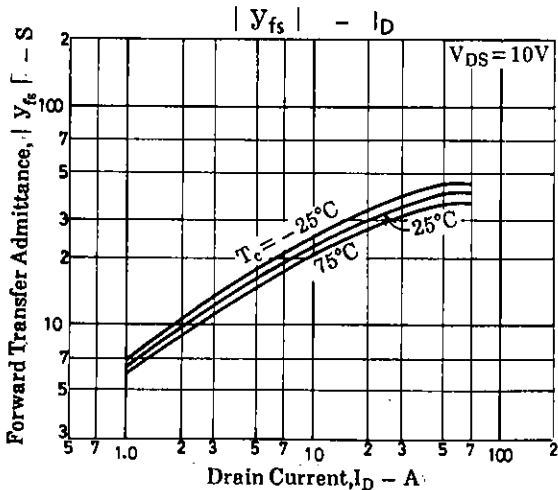
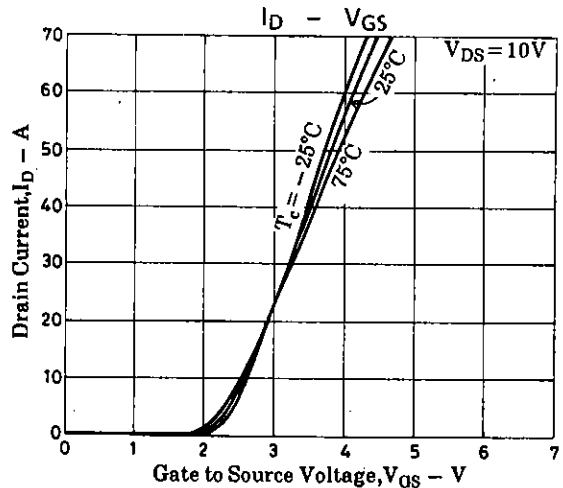
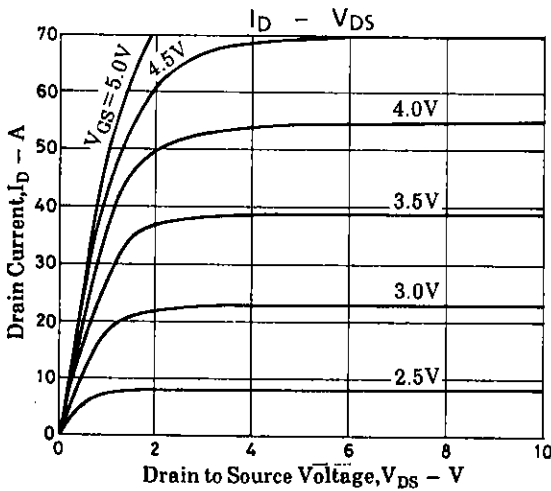
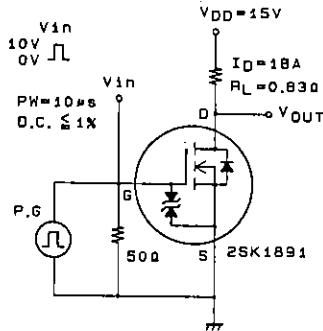
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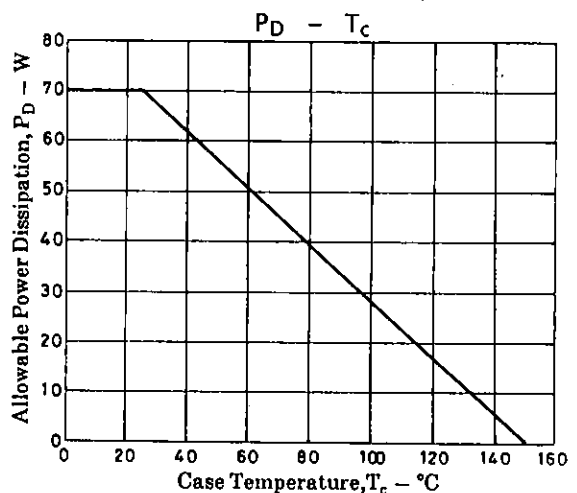
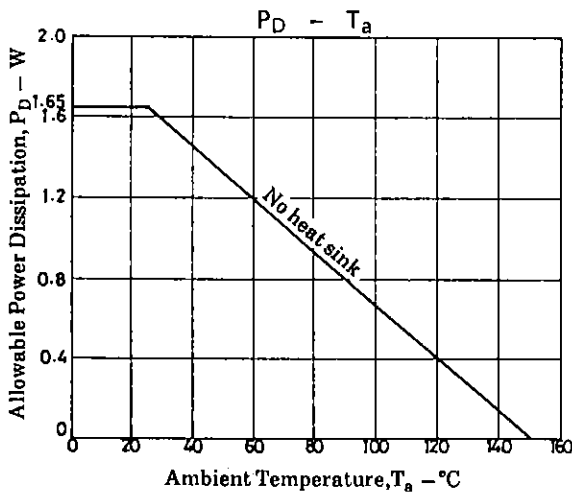
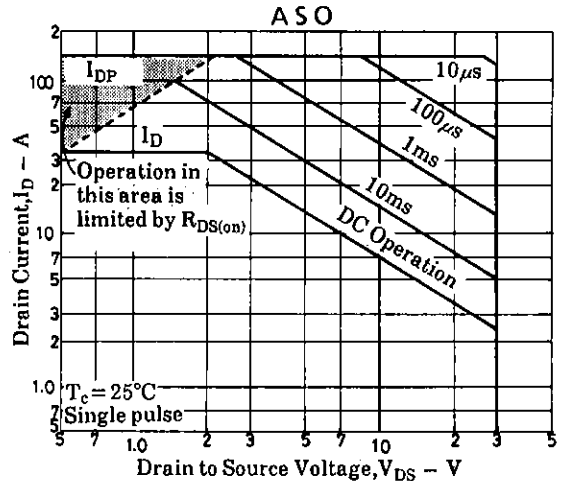
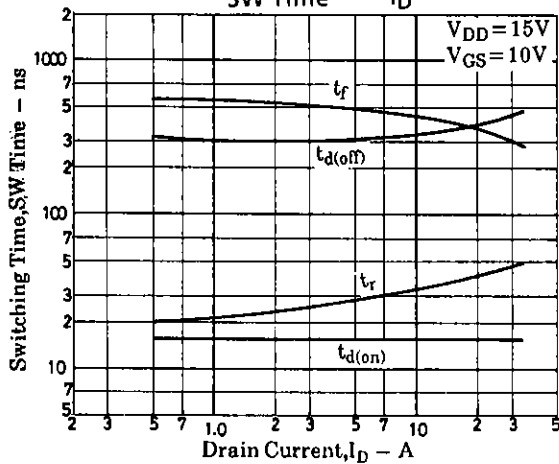
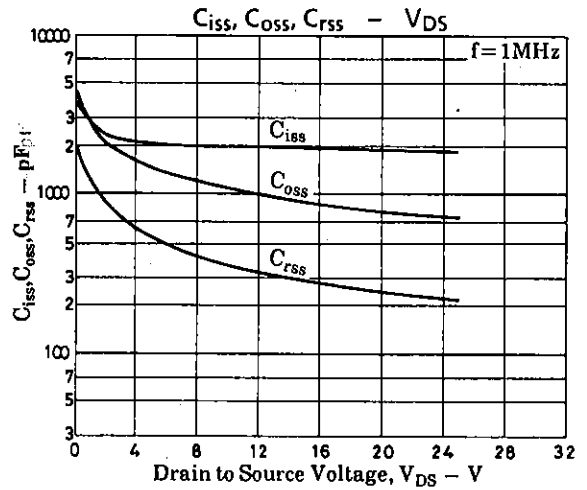
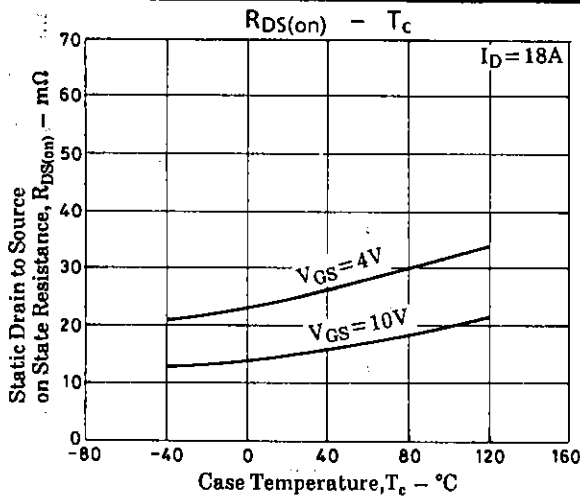
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			min	typ	max.	unit
Input Capacitance	$C_{iss}$	$V_{DS}=10V, f=1MHz$		2000		pF
Output Capacitance	$C_{oss}$	$V_{DS}=10V, f=1MHz$		1100		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, f=1MHz$		360		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	$t_r$	"		40		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		380		ns
Fall Time	$t_f$	"		370		ns
Diode Forward Voltage	$V_{SD}$	$I_S=35A, V_{GS}=0$		1.0	1.5	V

Switching Time Test Circuit





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