

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.

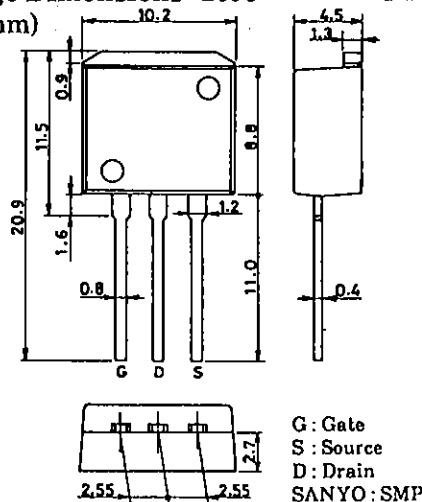
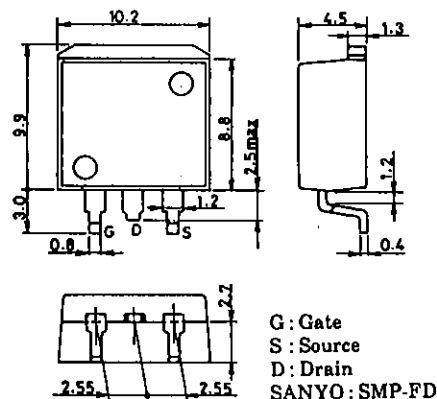
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Drain to Source Voltage	V_{DS}	30	V
Gate to Source Voltage	V_{GS}	± 15	V
Drain Current(DC)	I_D	35	A
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s, \text{duty cycle} \leq 1\%$	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	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}, V_{DS} = 0$	± 15			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30\text{V}, V_{GS} = 0$			100	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12\text{V}, V_{DS} = 0$			± 10	μA
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)

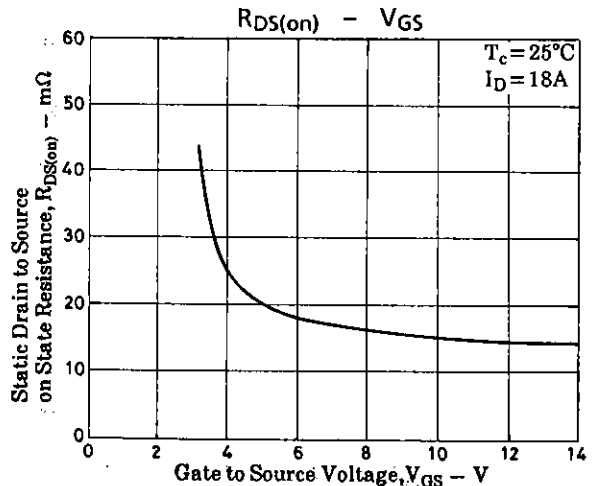
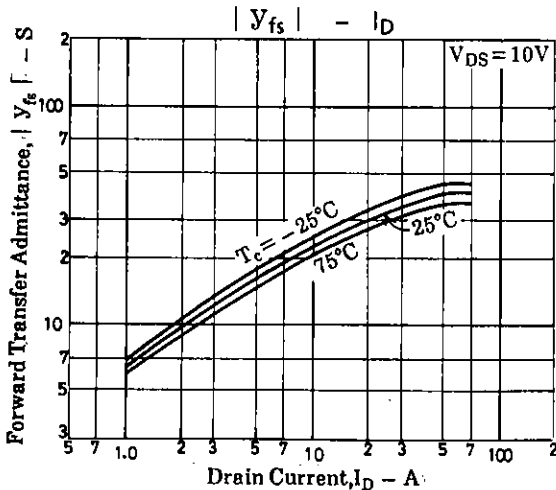
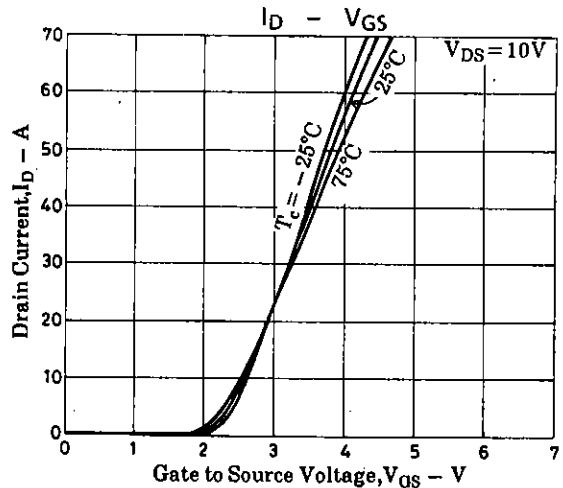
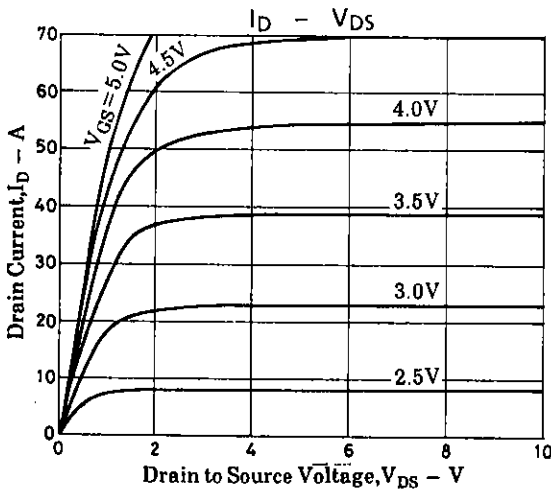
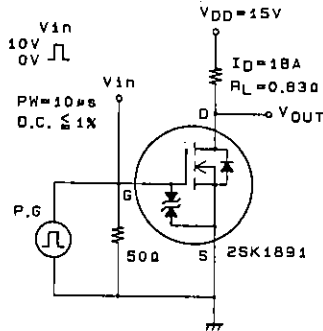
SANYO Electric Co., Ltd. Semiconductor Business Headquarters
 TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

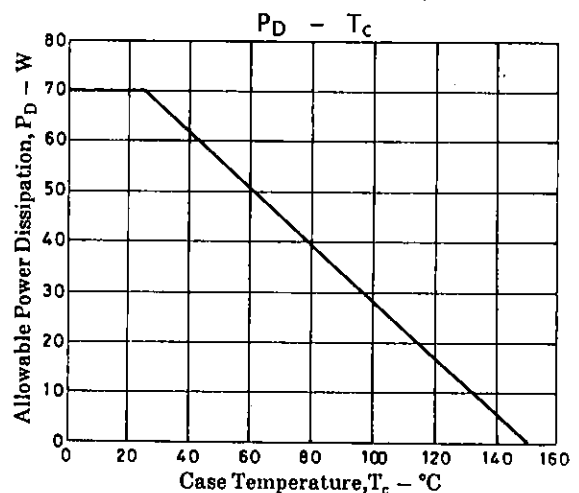
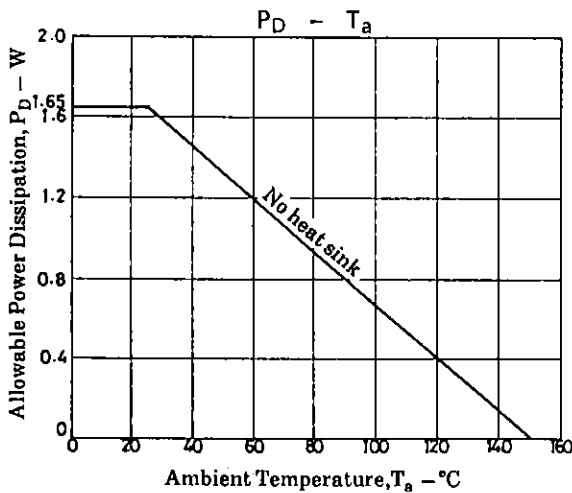
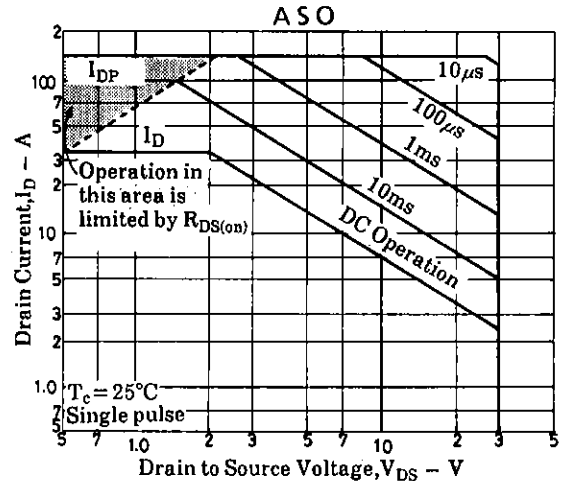
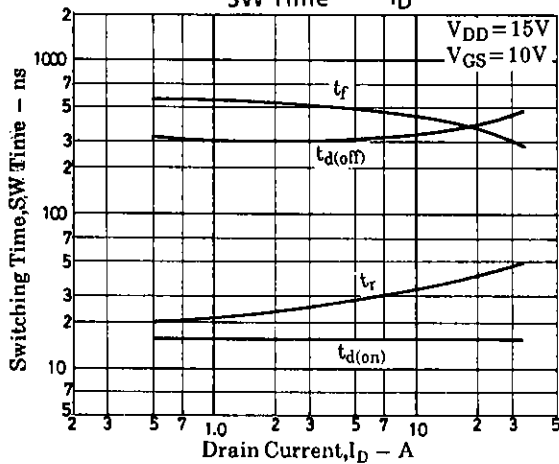
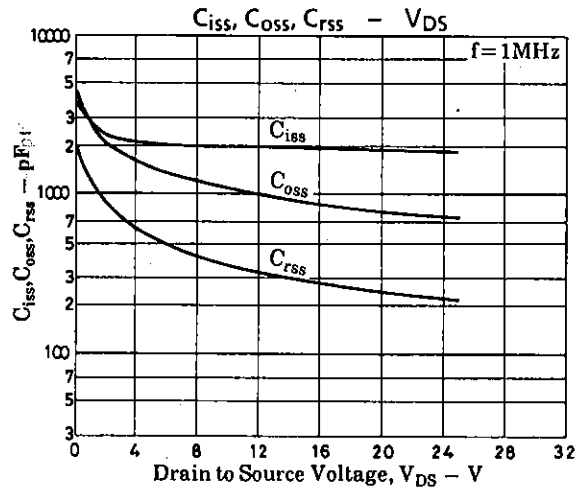
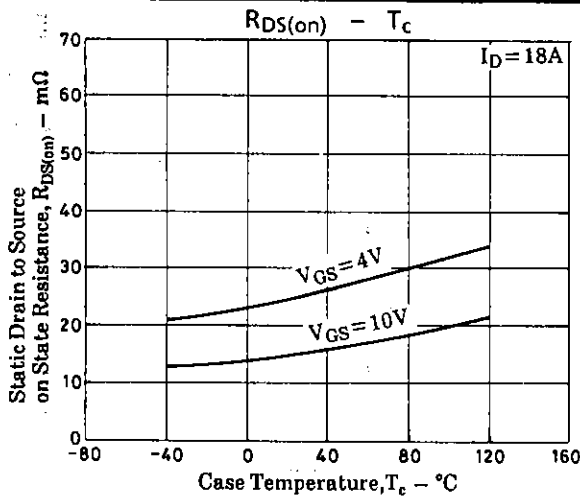
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			min	typ	max.	unit
Input Capacitance	C_{iss}	$V_{DS}=10V, f=1MHz$		2000		pF
Output Capacitance	C_{oss}	$V_{DS}=10V, f=1MHz$		1100		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V, f=1MHz$		360		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified 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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