

SANYO

No.4205

2SK1889

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 2SK1889-applied equipment.
 - High density surface mount applications.
 - Small size of 2SK1889-applied equipment.

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

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		18	A
Drain Current(Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	72	A
Allowable Power Dissipation	P _D		1.65	W
		T _c = 25°C	50	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		−55 to +150	°C

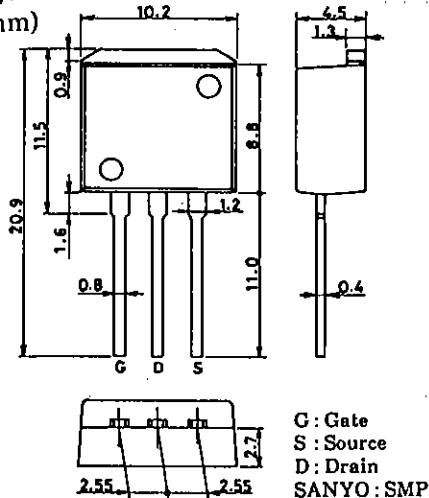
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			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	$V_{(BR)GSS}$	$I_G = \pm 100\mu A, V_{DS} = 0$	± 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} $	$V_{DS} = 10\text{V}, I_D = 9\text{A}$	7	11		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 9\text{A}, V_{GS} = 10\text{V}$		40	55	$m\Omega$
	$R_{DS(on)}$	$I_D = 9\text{A}, V_{GS} = 4\text{V}$		55	75	$m\Omega$

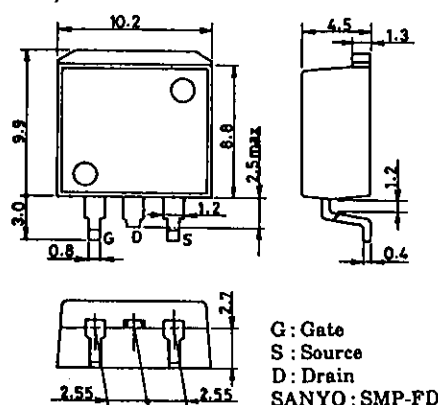
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Package Dimensions 2093

(unit: mm)

**Package Dimensions 2090**

(unit: mm)

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

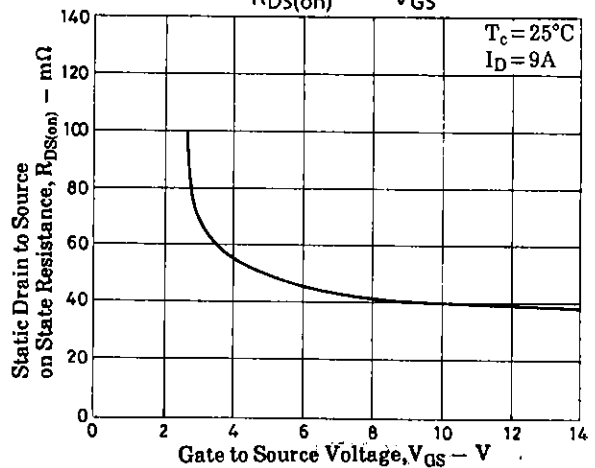
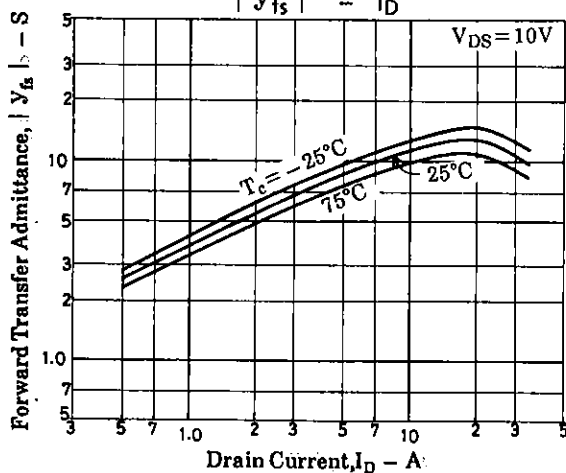
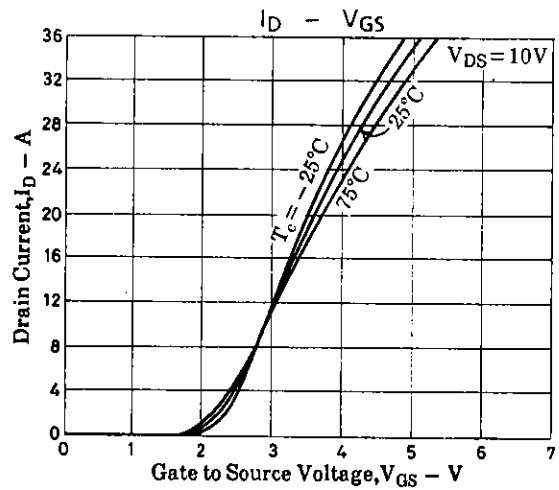
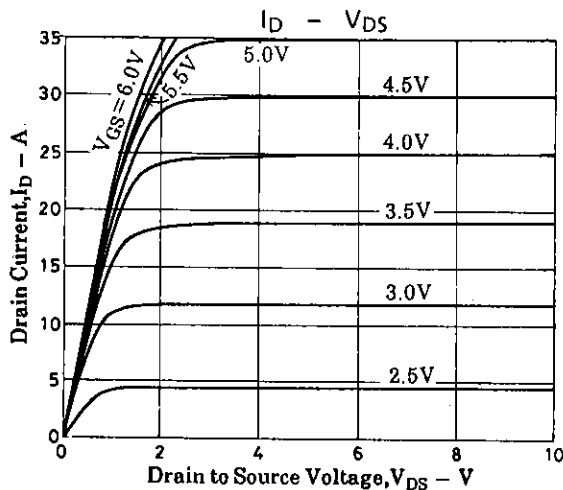
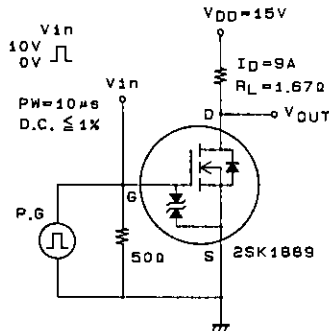
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

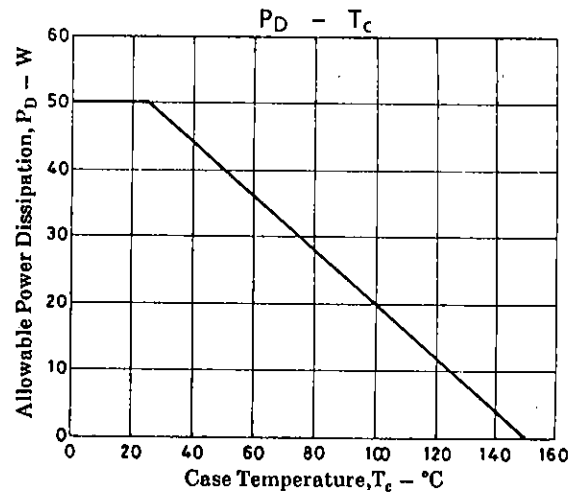
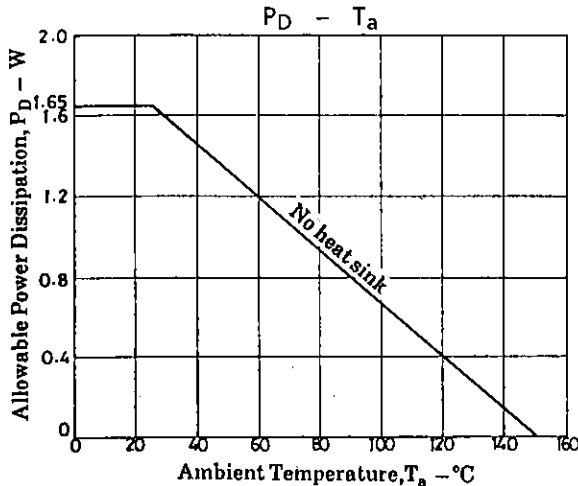
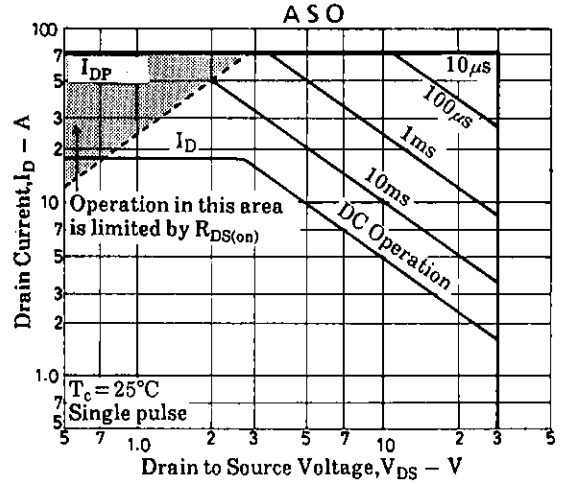
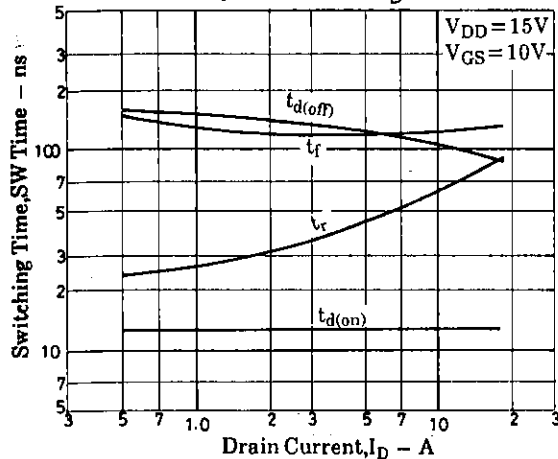
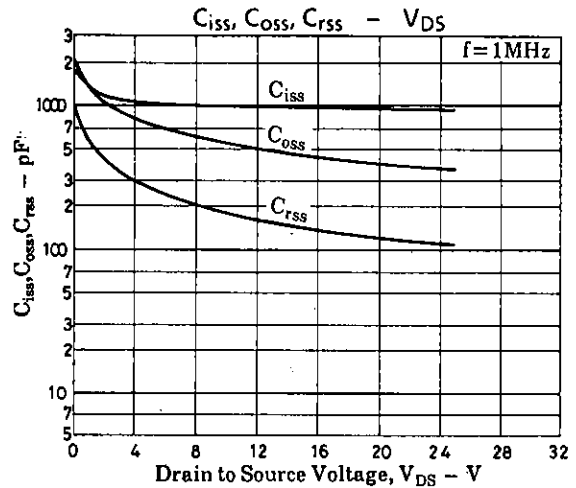
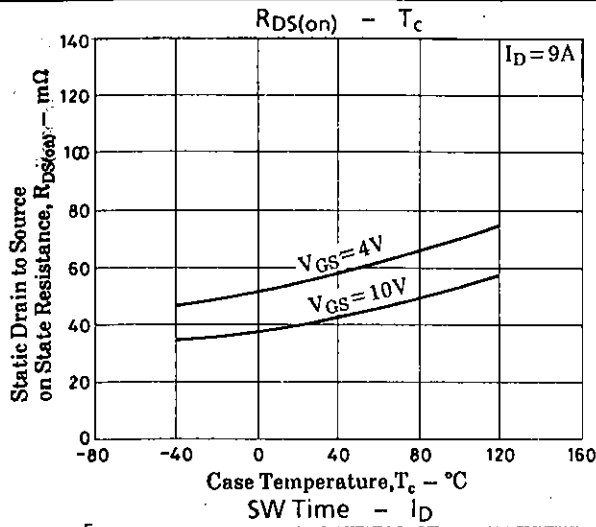
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			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS}=10V, f=1MHz$		1000		pF
Output Capacitance	C_{oss}	$V_{DS}=10V, f=1MHz$		550		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V, f=1MHz$		180		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		13		ns
Rise Time	t_r	"		60		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		110		ns
Fall Time	t_f	"		125		ns
Diode Forward Voltage	V_{SD}	$I_S=18A, V_{GS}=0$		1.0	1.5	V

Switching Time Test Circuit





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