

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 Ta = 25°C

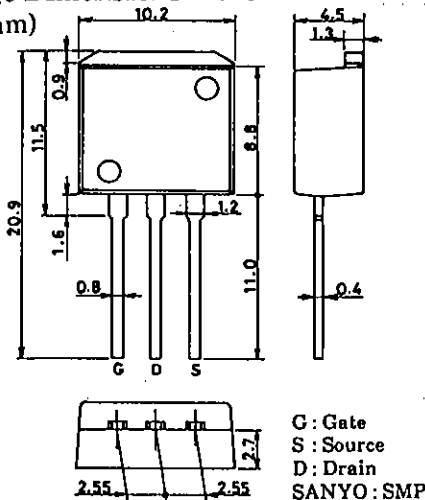
Drain to Source Voltage	V_{DSS}			unit
Gate to Source Voltage	V_{GSS}			V
Drain Current(DC)	I_D			A
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$		A
Allowable Power Dissipation	P_D			W
		$T_c = 25^\circ C$		W
Channel Temperature	T_{ch}			°C
Storage Temperature	T_{stg}			-55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

Electrical Characteristics at Ta = 25°C

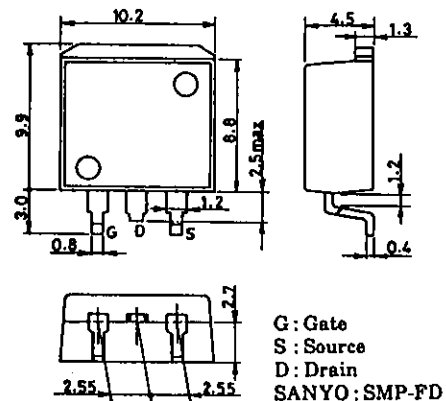
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	30			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu A, V_{DS} = 0$	± 15			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0$			100	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 9A$	7	11		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 9A, V_{GS} = 10V$		40	55	$m\Omega$
	$R_{DS(on)}$	$I_D = 9A, V_{GS} = 4V$		55	75	$m\Omega$

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Package Dimensions 2093
(unit: mm)



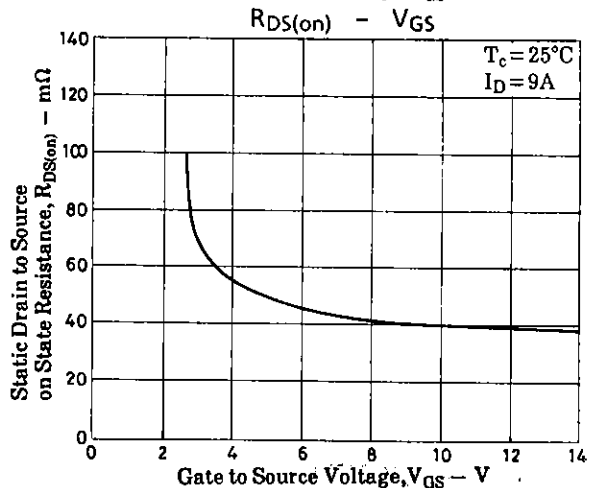
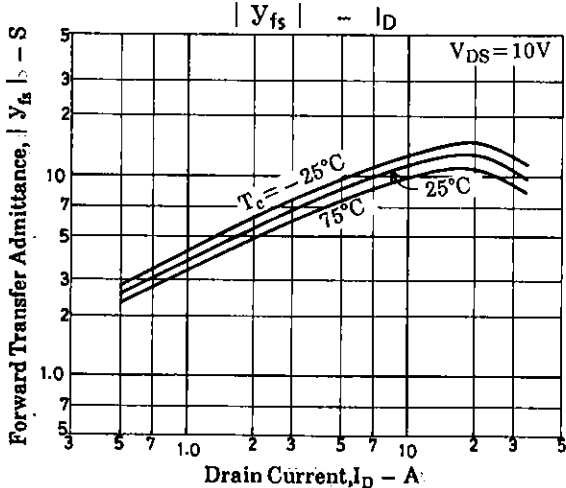
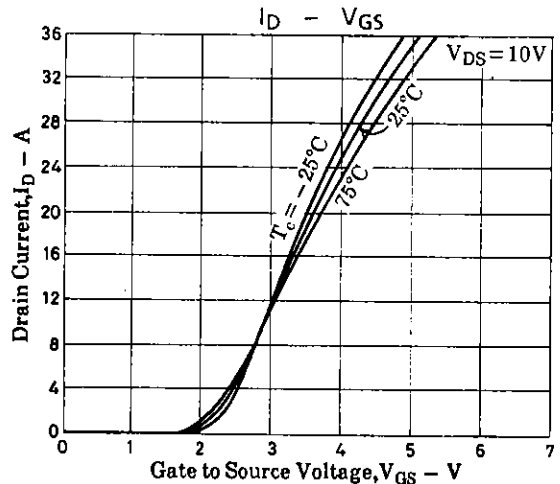
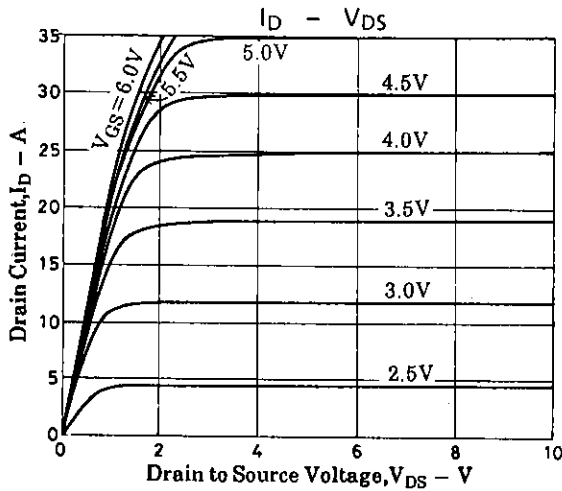
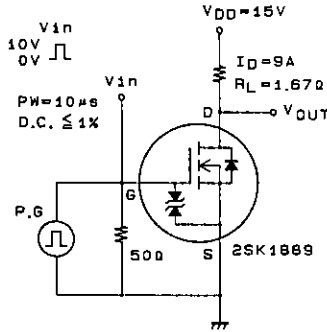
Package Dimensions 2090
(unit: mm)

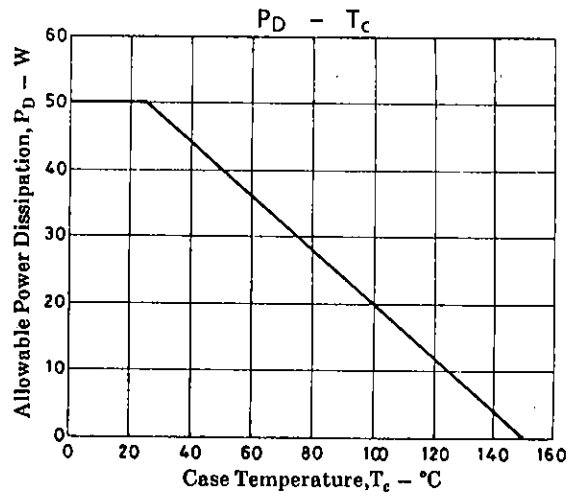
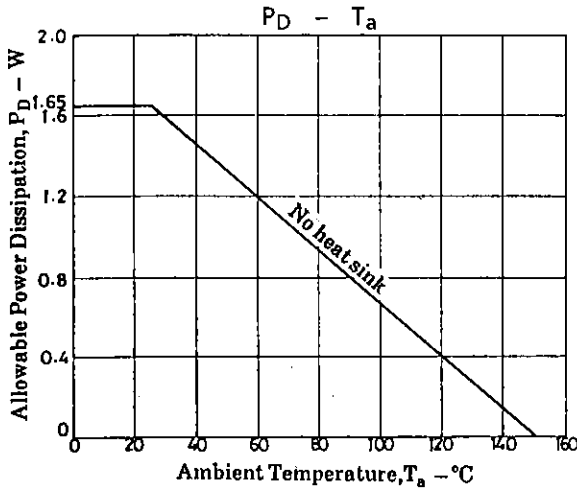
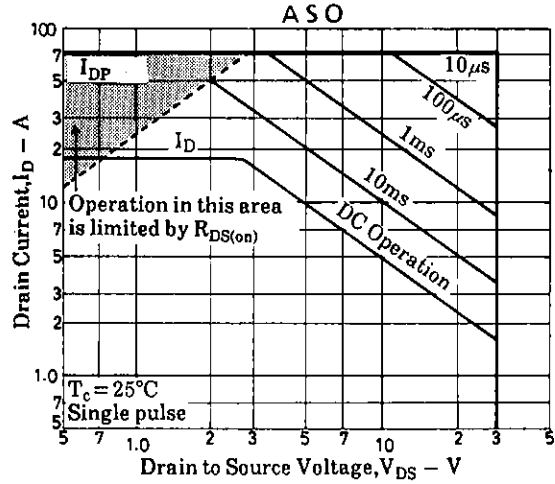
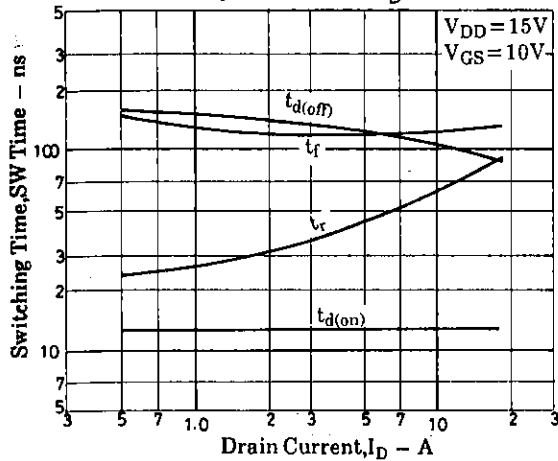
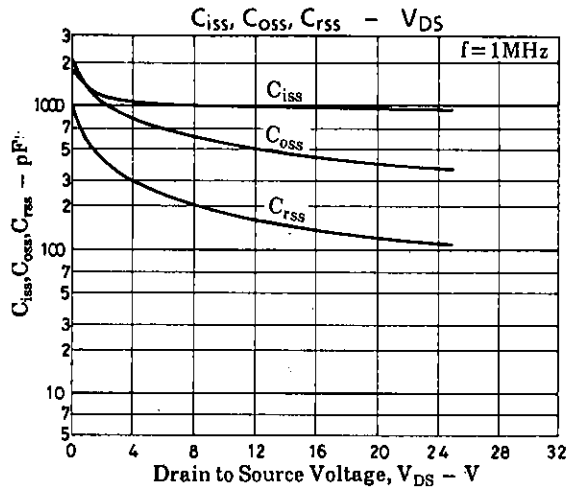
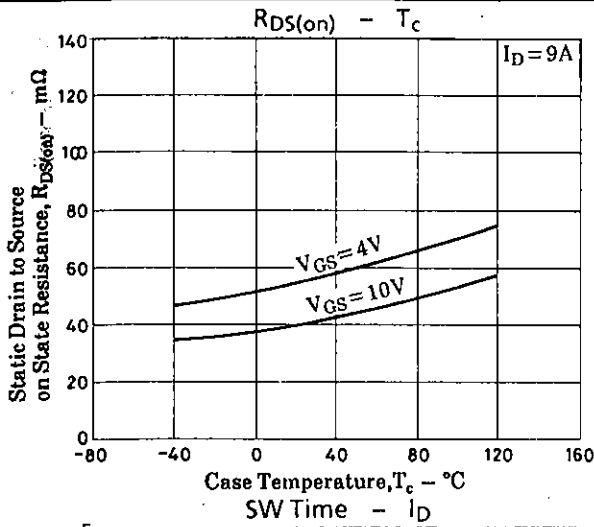


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			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS}=10V, f=1MHz$		1000		pF
Output Capacitance	C_{oss}	$V_{DS}=10V, f=1MHz$		550		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V, f=1MHz$		180		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test 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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