

<b>SANYO</b>	No.4205	<b>2SK1889</b>
		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**

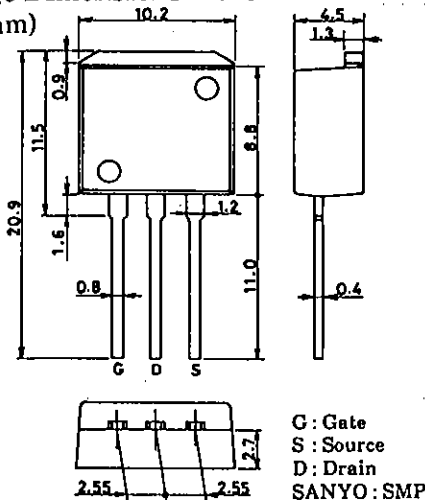
Drain to Source Voltage	V <sub>DSS</sub>		30	V
Gate to Source Voltage	V <sub>GSS</sub>		±15	V
Drain Current(DC)	I <sub>D</sub>		18	A
Drain Current(Pulse)	I <sub>DP</sub>	PW ≤ 10μs, duty cycle ≤ 1%	72	A
Allowable Power Dissipation	P <sub>D</sub>		1.65	W
		T <sub>c</sub> = 25°C	50	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

**Electrical Characteristics at Ta = 25°C**

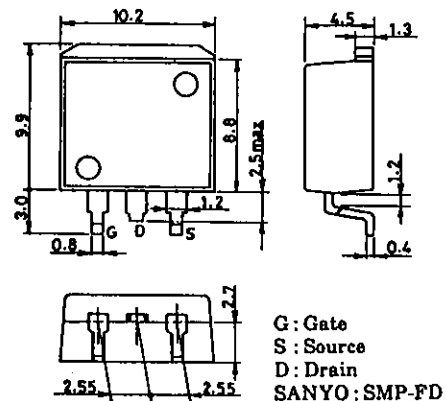
			min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0	30			V
G-S Breakdown Voltage	V <sub>(BR)GSS</sub>	I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0	±15			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 30V, V <sub>GS</sub> = 0			100	μA
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, V <sub>DS</sub> = 0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA	1.0		2.0	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 9A	7	11		S
Static Drain to Source on State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> = 9A, V <sub>GS</sub> = 10V		40	55	mΩ
	R <sub>DS(on)</sub>	I <sub>D</sub> = 9A, V <sub>GS</sub> = 4V		55	75	mΩ

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



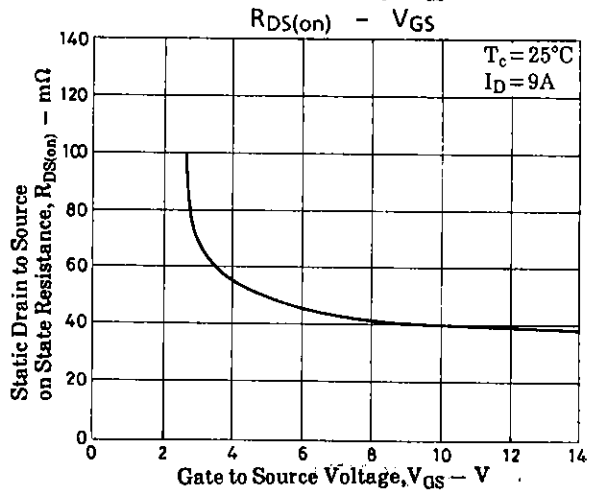
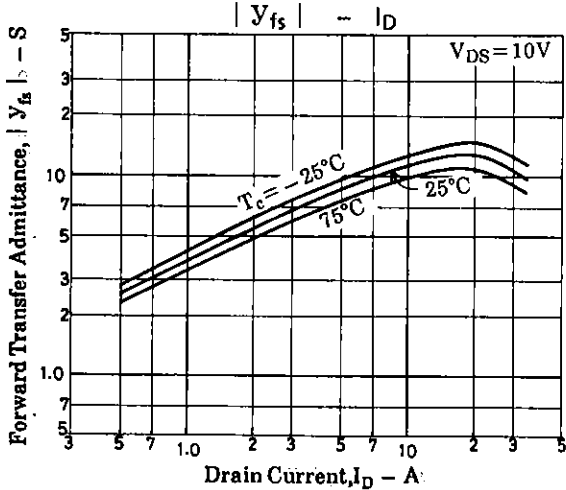
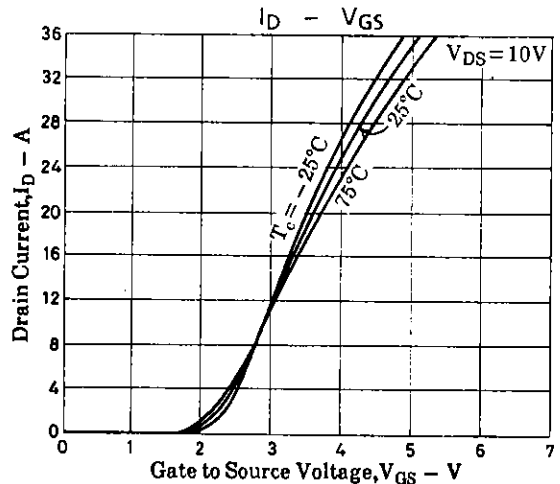
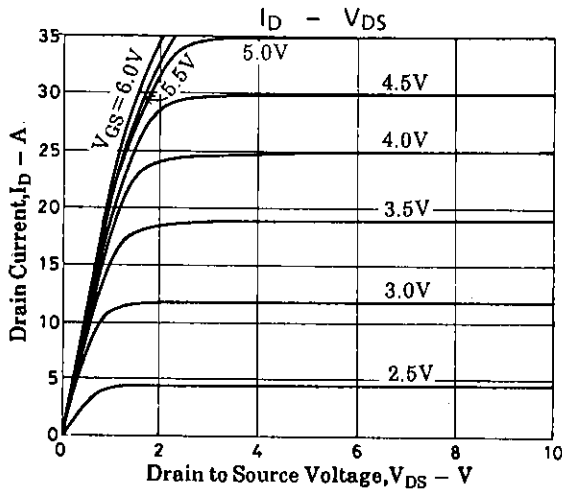
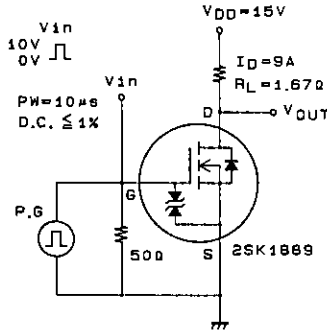
**Package Dimensions 2090**  
(unit: mm)

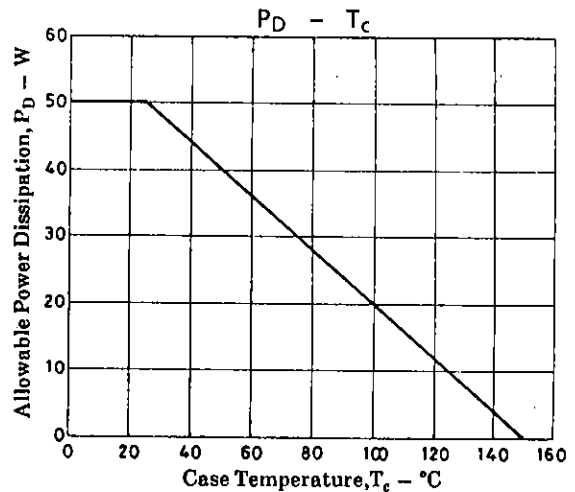
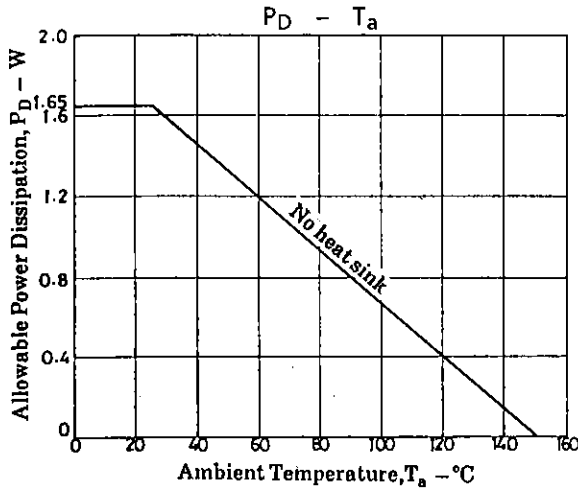
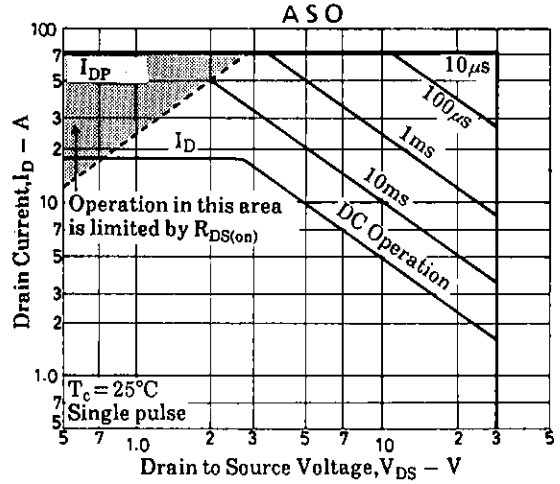
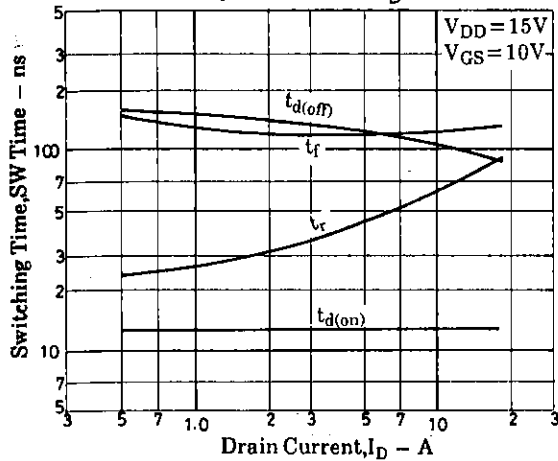
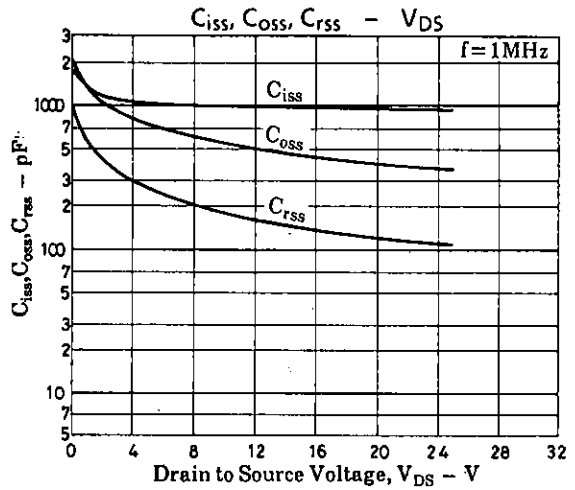
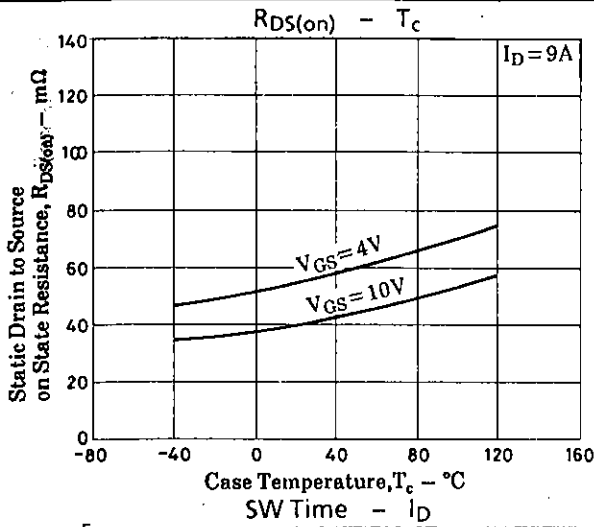


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			min	typ	max	unit
Input Capacitance	$C_{iss}$	$V_{DS}=10V, f=1MHz$		1000		pF
Output Capacitance	$C_{oss}$	$V_{DS}=10V, f=1MHz$		550		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, f=1MHz$		180		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified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