

SANYO	No.4226	2SK1907
		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 2SK1907-applied equipment.
 - High density surface mount applications.
 - Small size of 2SK1907-applied equipment.

Absolute Maximum Ratings at Ta = 25°C

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

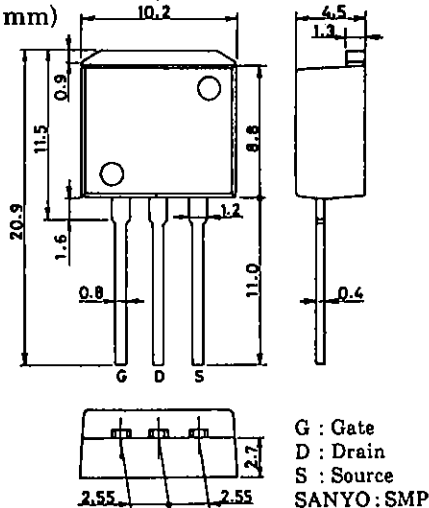
				unit
				100 V
				± 15 V
				12 A
				48 A
				1.65 W
				50 W
				150 °C
				-55 to +150 °C

Electrical Characteristics at Ta = 25°C

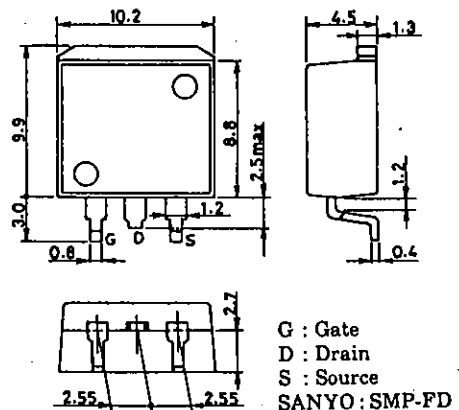
			min	typ	max
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	100		V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100 \mu A, V_{DS} = 0$	± 15		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 100V, V_{GS} = 0$			100 μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0$			$\pm 10 \mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	1.0		2.0 V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 6A$	6	9.5	S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 6A, V_{GS} = 10V$	0.12	0.16	Ω
	$R_{DS(on)}$	$I_D = 6A, V_{GS} = 4V$	0.16	0.22	Ω

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Package Dimensions 2093
(unit : mm)



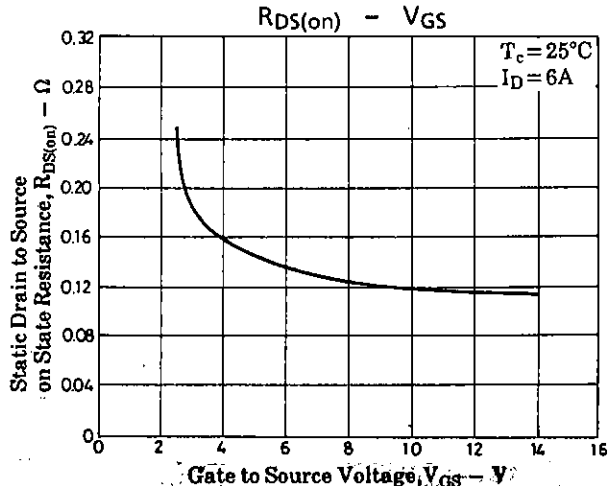
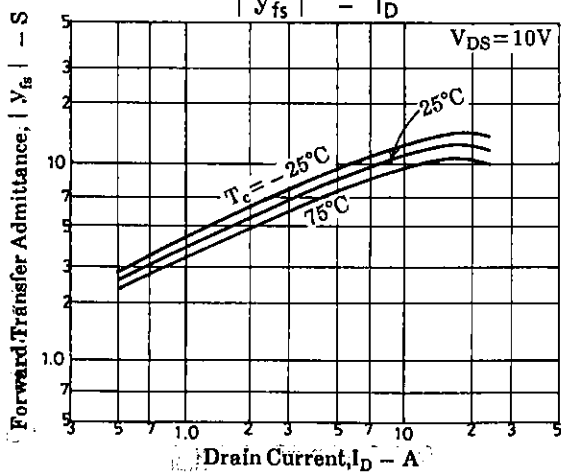
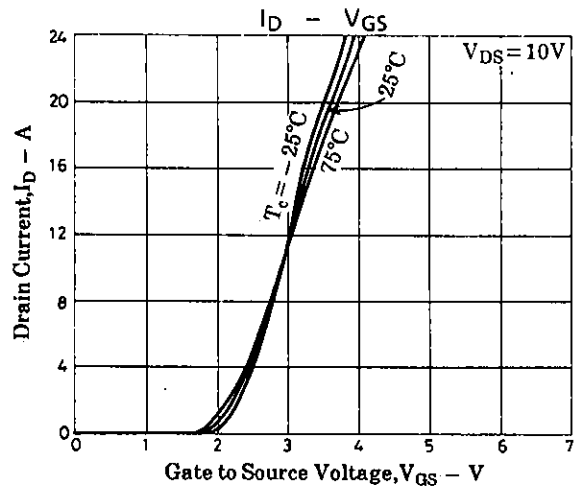
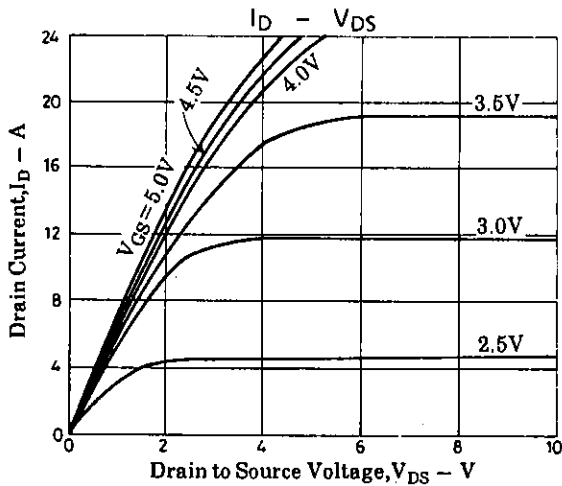
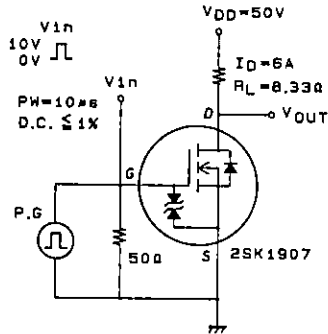
Package Dimensions 2090
(unit : mm)

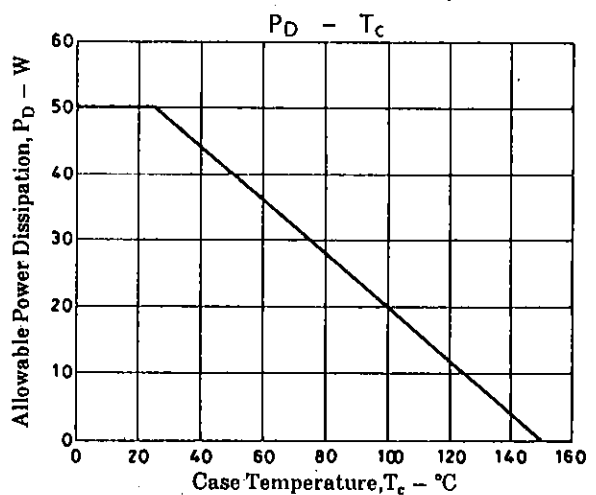
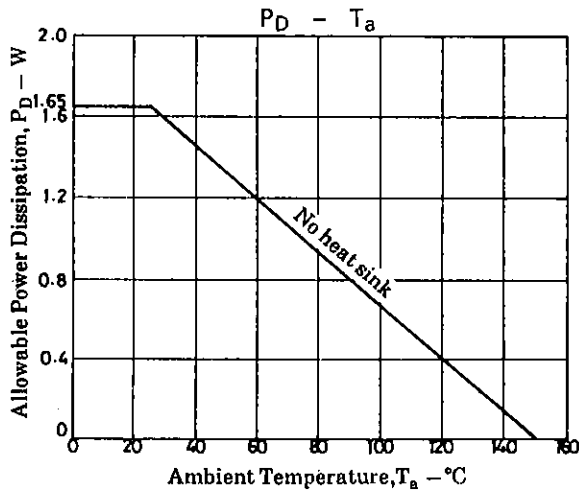
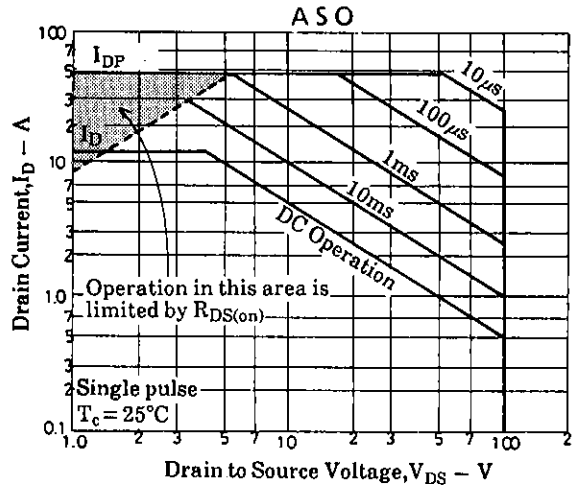
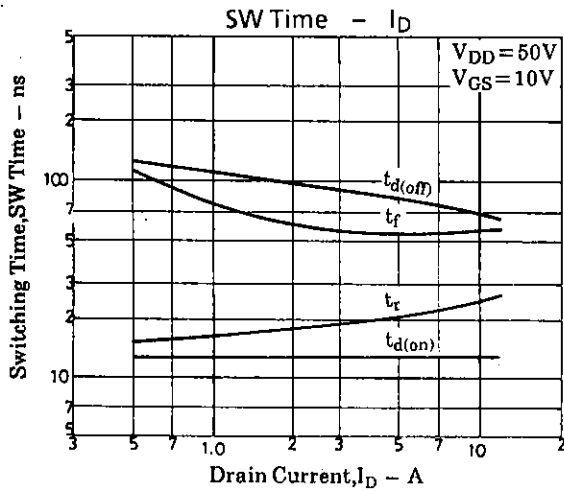
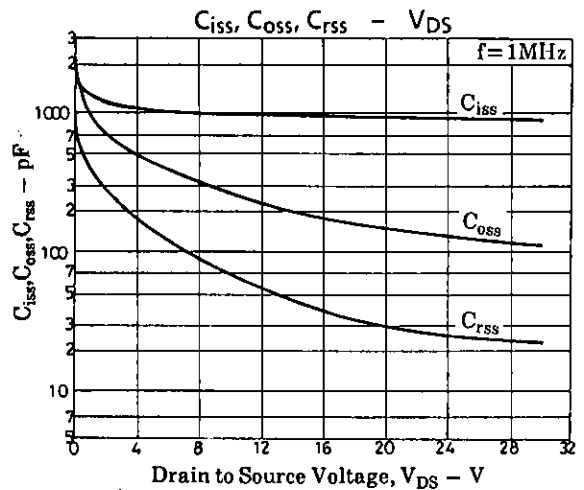
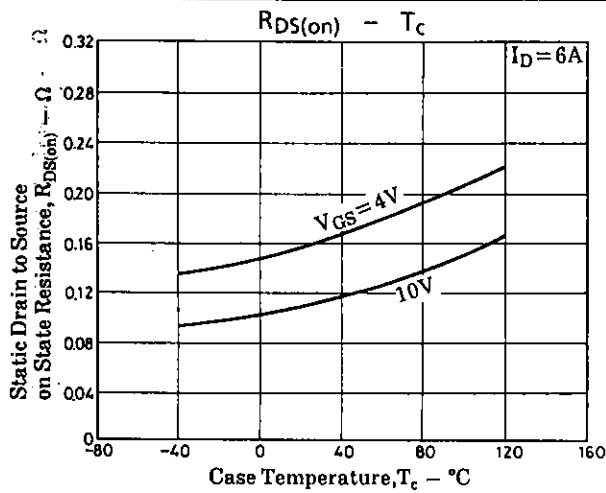


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			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS} = 20V, f = 1MHz$		950		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V, f = 1MHz$		150		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V, f = 1MHz$		30		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		13		ns
Rise Time	t_r	"		22		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		80		ns
Fall Time	t_f	"		55		ns
Diode Forward Voltage	V_{SD}	$I_S = 12A, V_{GS} = 0$	1.0	1.5		V

Switching Time Test Circuit





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