

SANYO	No.4210	2SK1900
		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 2SK1900-applied equipment.
 - High density surface mount applications.
 - Small size of 2SK1900-applied equipment.

Absolute Maximum Ratings at Ta = 25°C

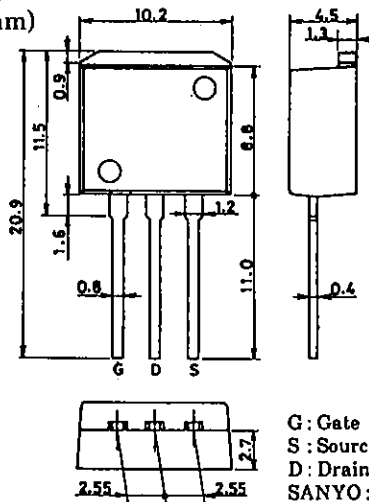
			unit
Drain to Source Voltage	V _{DS}	60	V
Gate to Source Voltage	V _{GS}	±20	V
Drain Current(DC)	I _D	30	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	120 A
Allowable Power Dissipation	P _D	1.65	W
		T _c = 25°C	70 W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

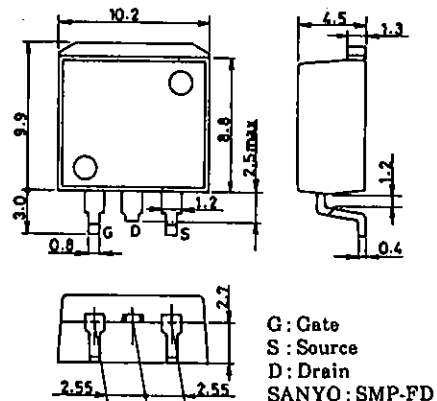
			min	typ	max	
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	60			V
G-S Breakdown Voltage	V _{(BR)GSS}	I _G = ±100μA, V _{DS} = 0	±20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 60V, V _{GS} = 0			100	μA
Gate to Source Leakage Current	I _{GSS}	V _{GS} = ±12V, V _{DS} = 0			±10	μA
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 = 15A	16	27		S
Static Drain to Source on State Resistance	R _{DS(on)}	I _D = 15A, V _{GS} = 10V		30	40	mΩ
	R _{DS(on)}	I _D = 15A, V _{GS} = 4V		40	55	mΩ

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Package Dimensions 2093
(unit : mm)



Package Dimensions 2090
(unit : mm)

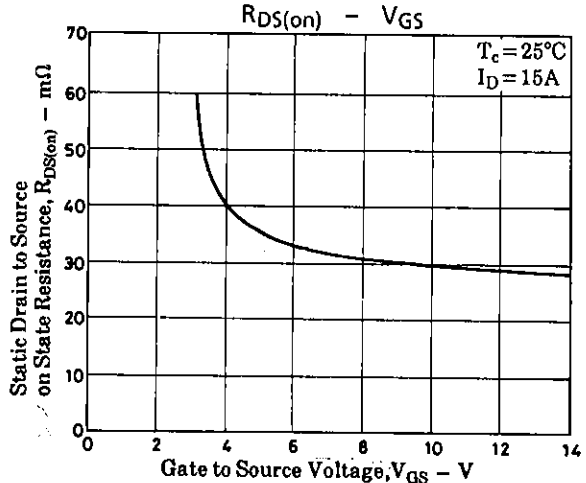
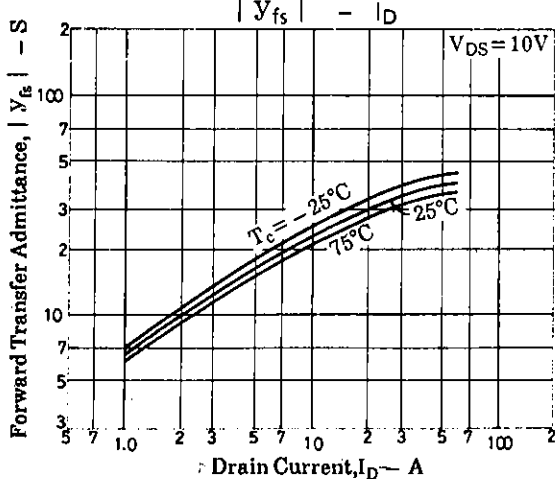
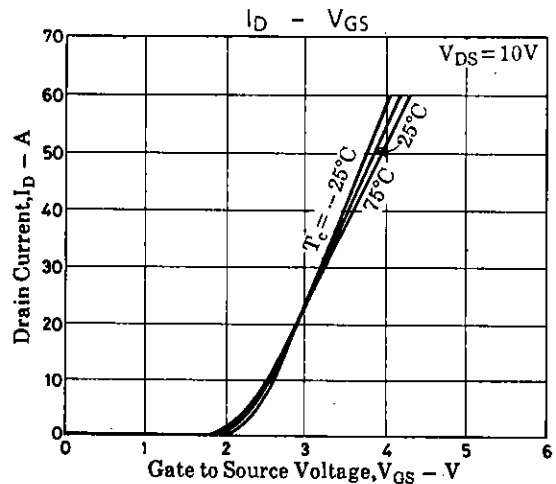
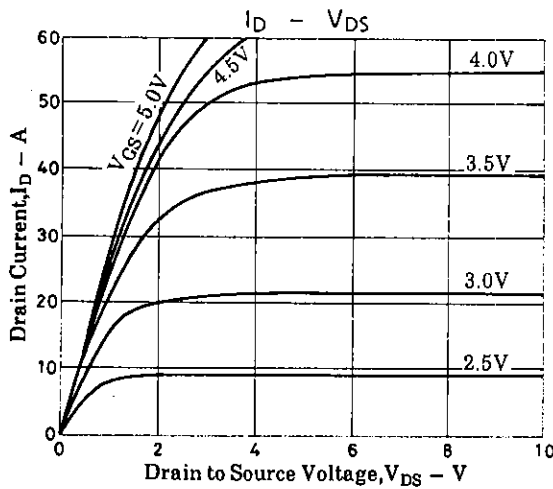
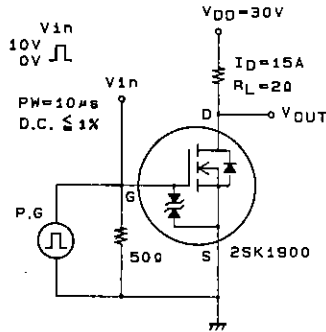


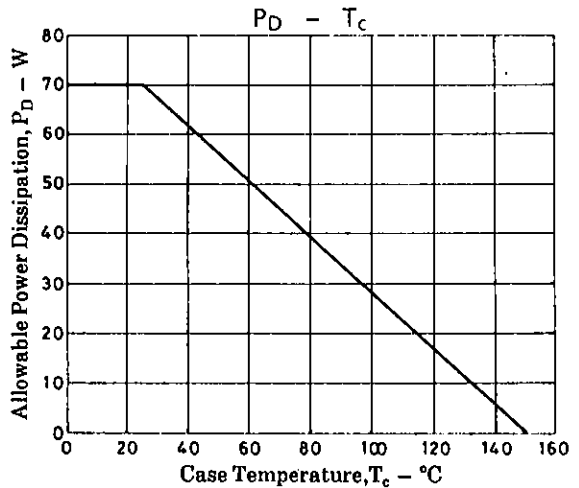
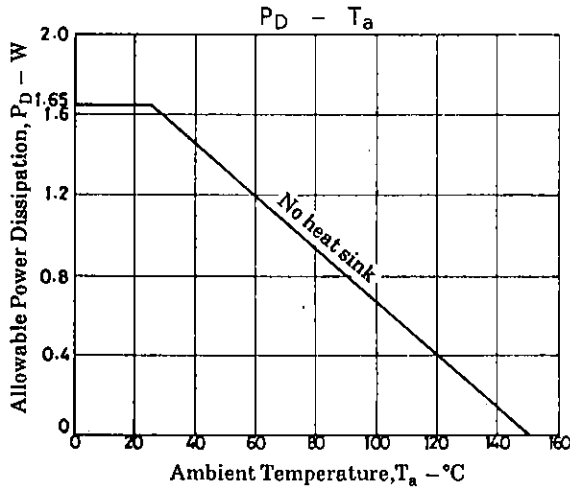
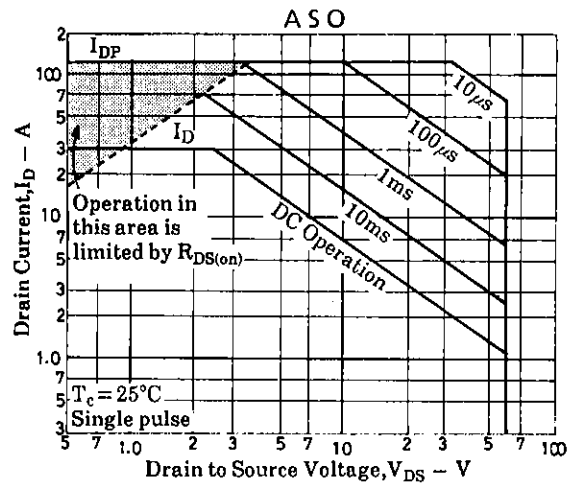
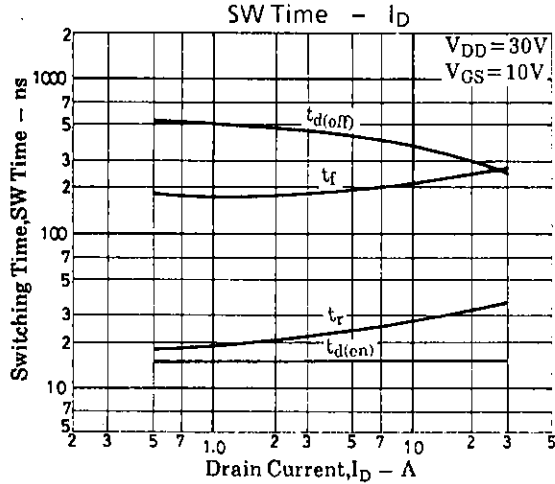
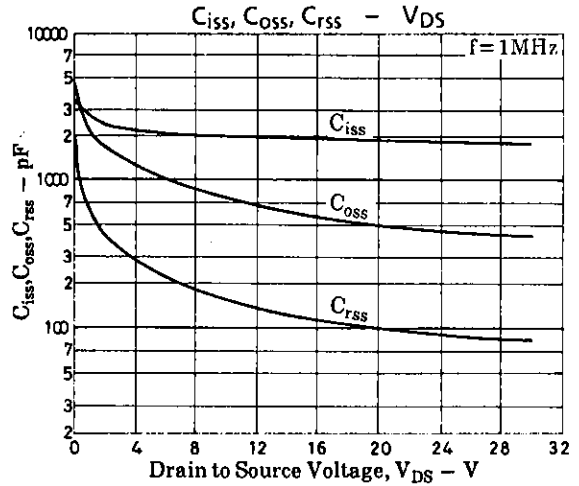
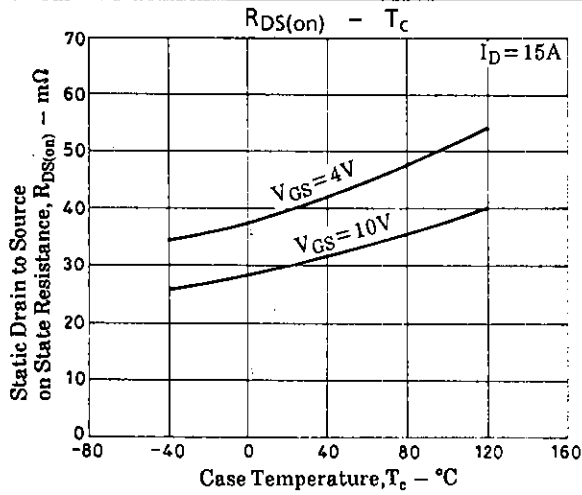
2SK1900

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			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		1900		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		500		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		100		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	t_r	"		30		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		335		ns
Fall Time	t_f	"		225		ns
Diode Forward Voltage	V_{SD}	$I_S=30A, V_{GS}=0$		1.0	1.5	V

Switching Time Test Circuit





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