

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

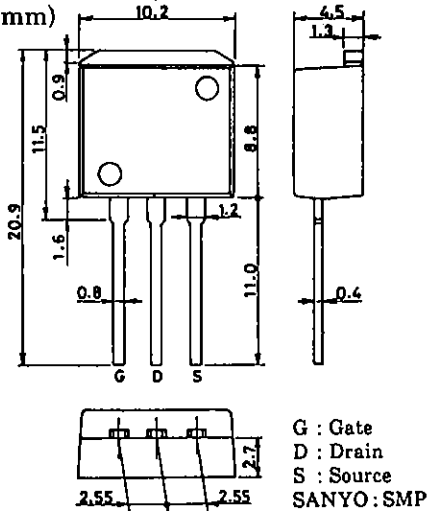
Parameter	Symbol	Condition	Value	unit
Drain to Source Voltage	V _{DSS}		100	V
Gate to Source Voltage	V _{GSS}		±15	V
Drain Current(DC)	I _D		12	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10 μs, duty cycle ≤ 1%	48	A
Allowable Power Dissipation	P _D	T _c = 25°C	1.65	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

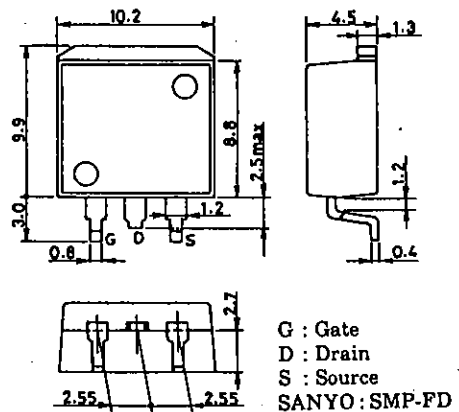
Parameter	Symbol	Condition	min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	100			V
G-S Breakdown Voltage	V _{(BR)GSS}	I _G = ±100 μA, V _{DS} = 0	±15			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 100V, V _{GS} = 0			100	μA
Gate to Source Leakage Current	I _{GSS}	V _{GS} = ±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 = 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)



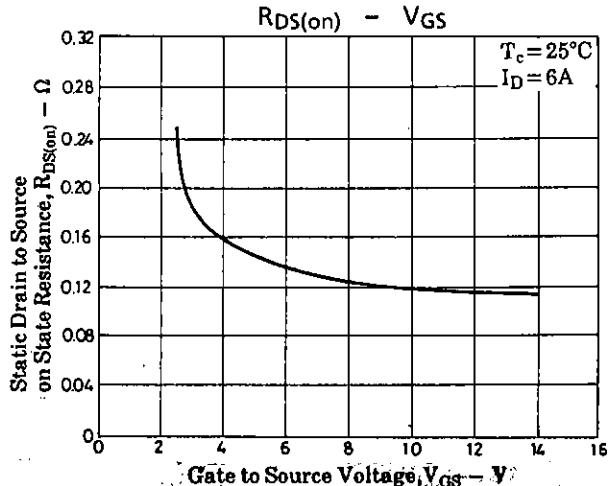
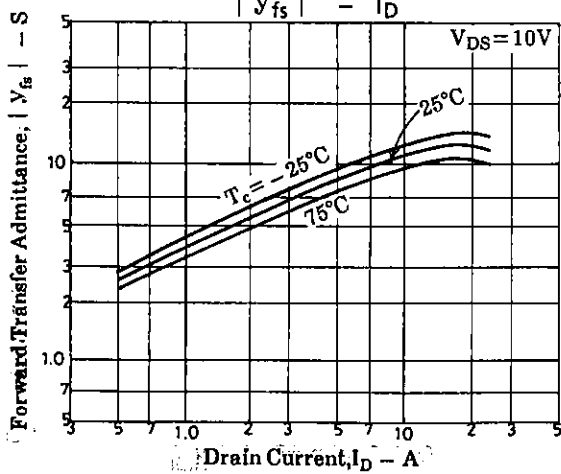
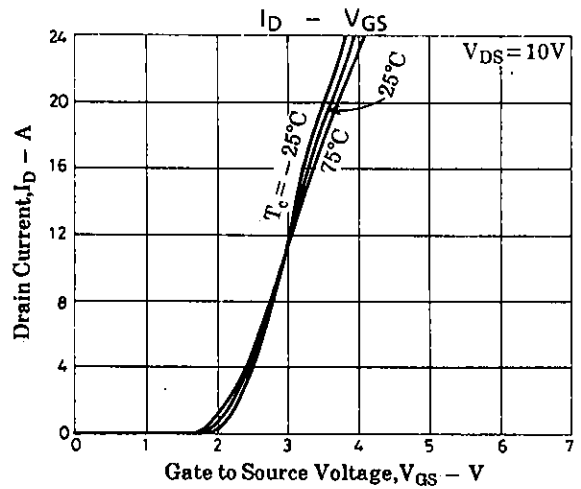
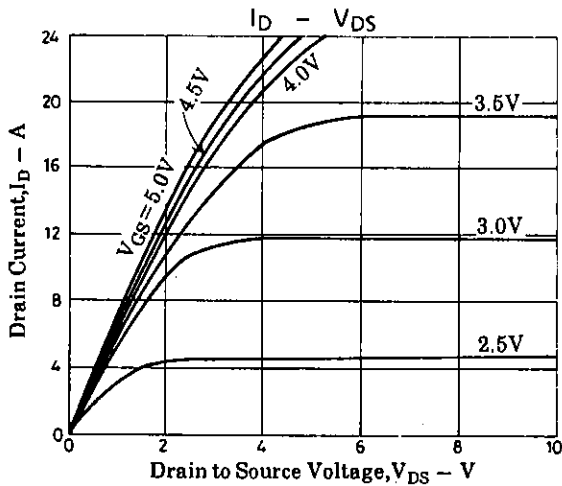
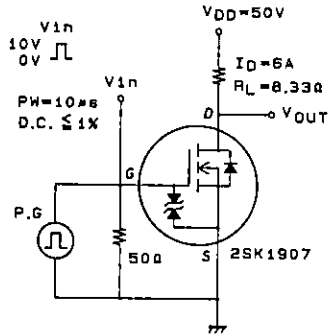
Package Dimensions 2090
(unit : mm)

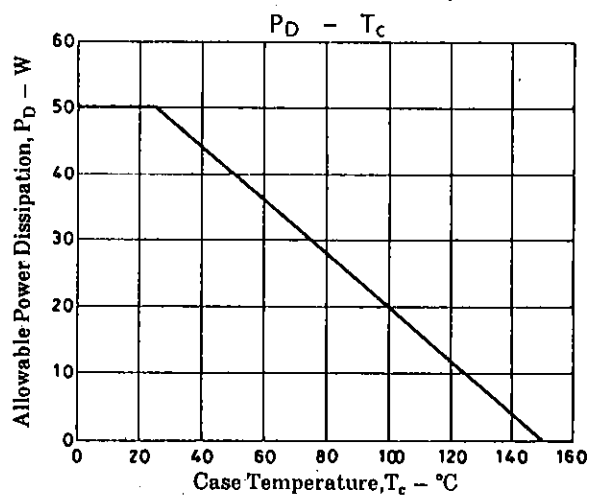
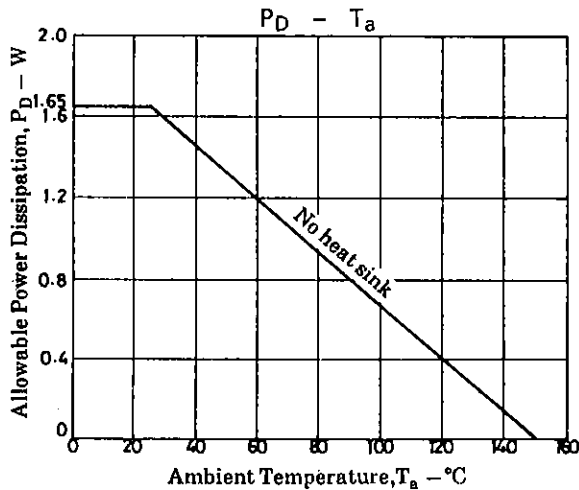
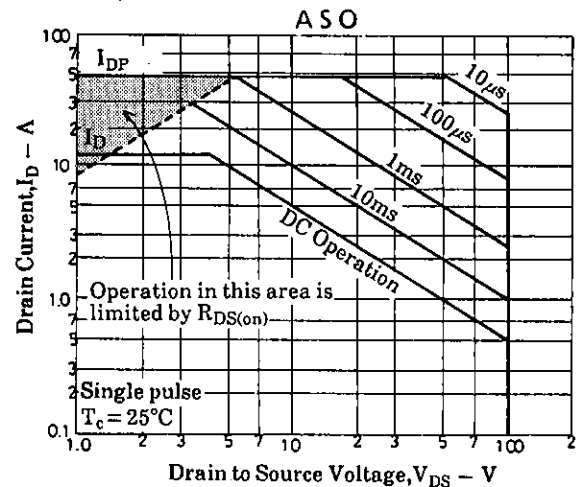
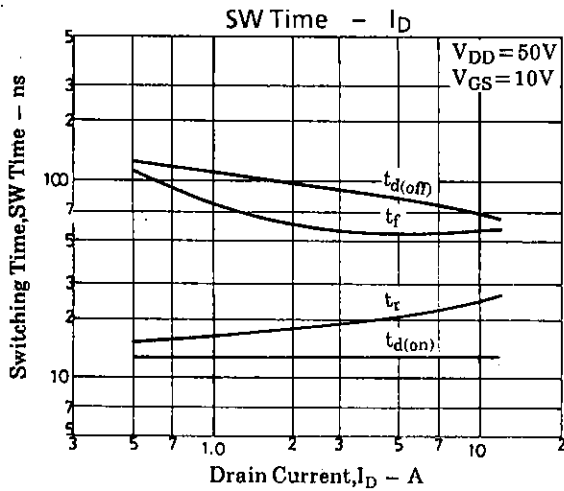
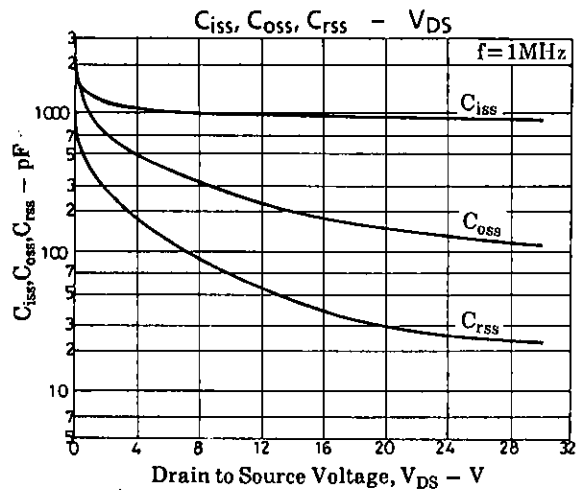
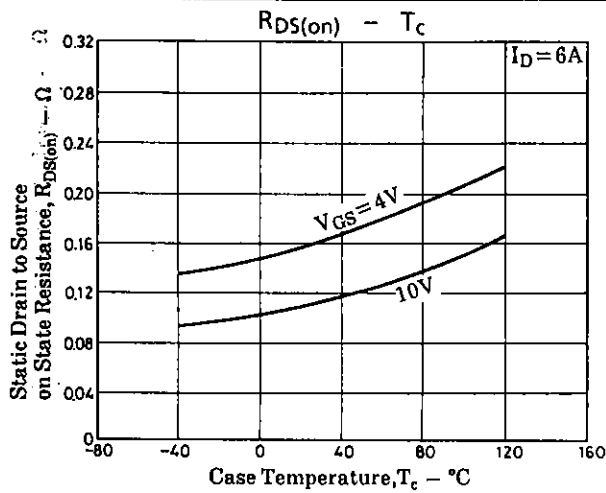


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			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS} = 20V, f = 1MHz$		950		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V, f = 1MHz$		150		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V, f = 1MHz$		30		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified 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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