



No.4225

2SK1906

N-Channel MOS Silicon FET

Very High-Speed
Switching Applications

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Micaless package facilitating mounting.

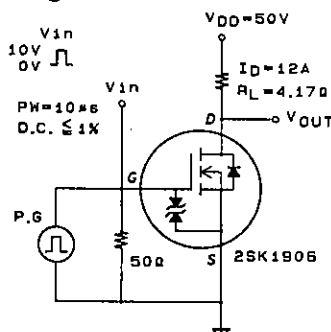
Absolute Maximum Ratings at Ta = 25°C

			unit
Drain to Source Voltage	V _{DSS}	100	V
Gate to Source Voltage	V _{GSS}	±15	V
Drain Current(DC)	I _D	20	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10 μs, duty cycle ≤ 1%	80 A
Allowable Power Dissipation	P _D	2.0	W
		T _c = 25°C	30 W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

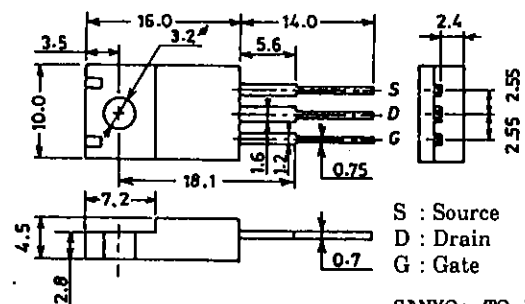
			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	100			V
G-S Breakdown Voltage	V _{(BR)GSS}	I _G = ±100 μA, V _{DS} = 0	±15			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 100V, V _{GS} = 0			100	μA
Gate to Source Leakage Current	I _{GSS}	V _{GS} = ±12V, V _{DS} = 0			±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 = 12A	15	24.5		S
Static Drain to Source on State Resistance	R _{DSS(on)}	I _D = 12A, V _{GS} = 10V		60	80	mΩ
	R _{DSS(on)}	I _D = 12A, V _{GS} = 4V		80	110	mΩ
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		1900		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		300		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		60		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		15		ns
Rise Time	t _r	"		20		ns
Turn-OFF Delay Time	t _{d(off)}	"		290		ns
Fall Time	t _f	"		100		ns
Diode Forward Voltage	V _{SD}	I _S = 20A, V _{GS} = 0	1.0	1.5		V

Switching Time Test Circuit



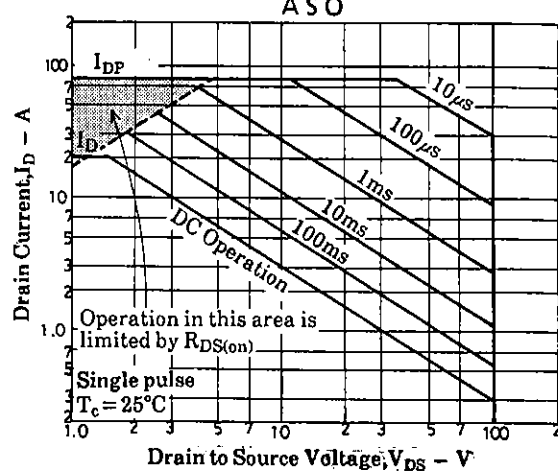
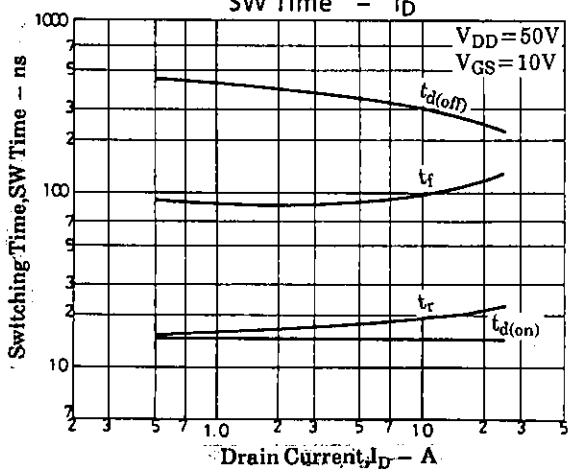
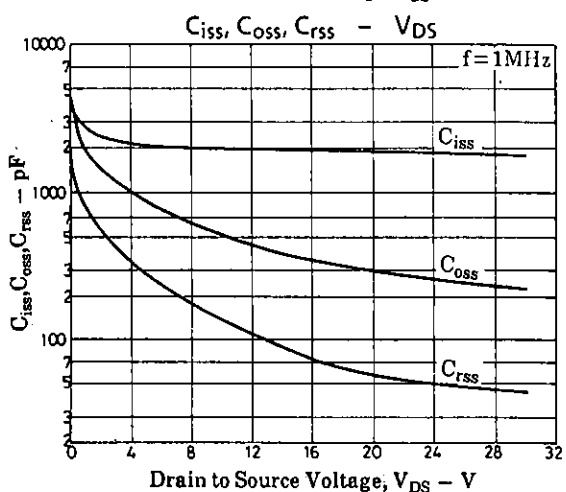
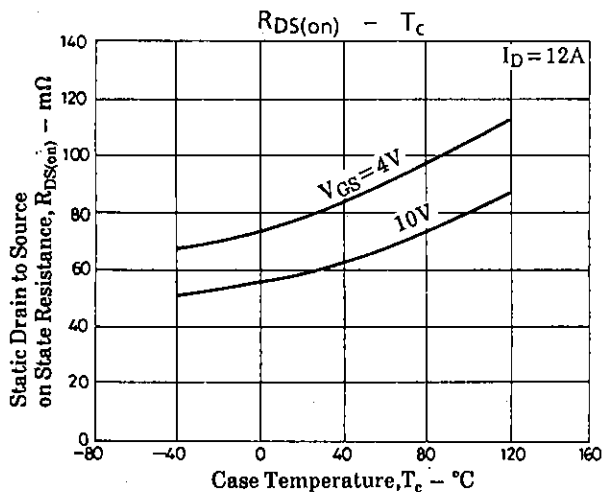
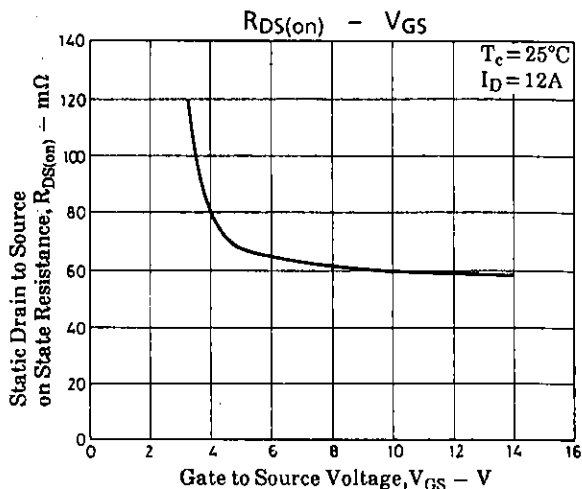
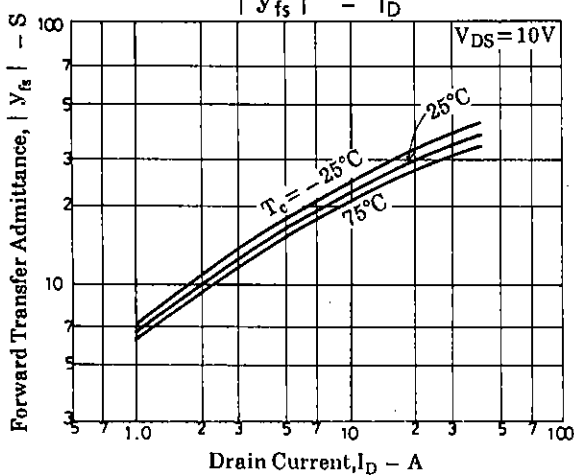
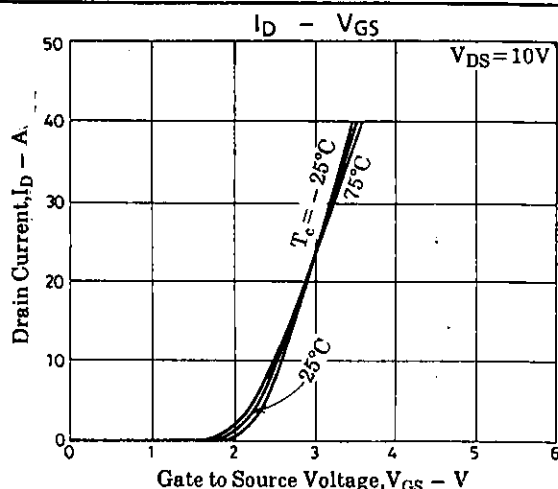
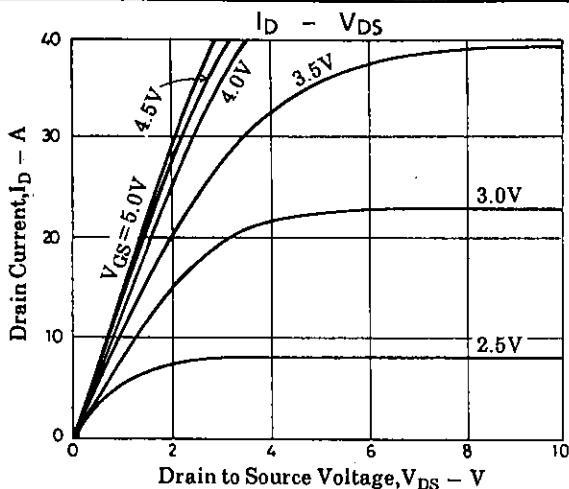
Package Dimensions 2063

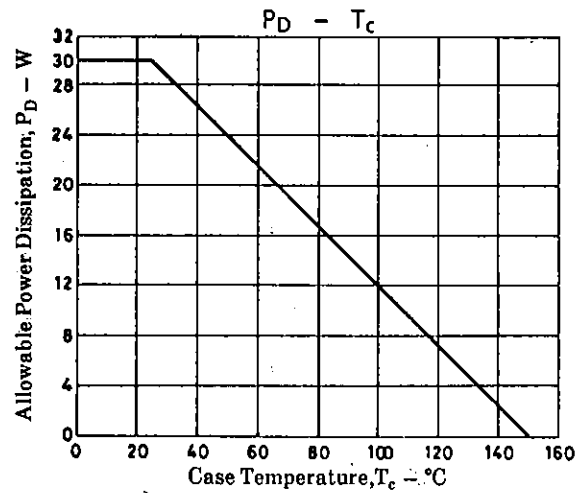
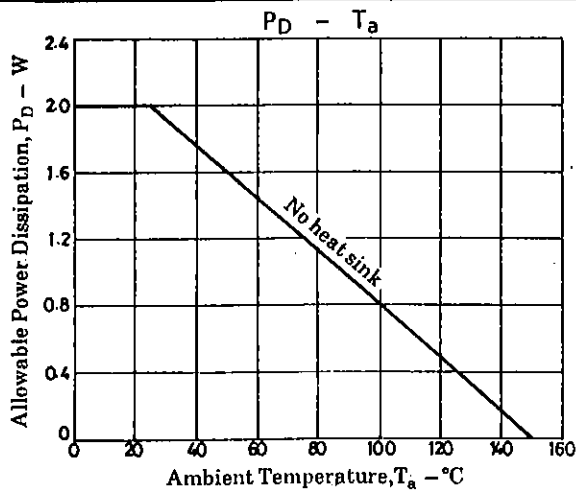
(unit: mm)



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