

	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.

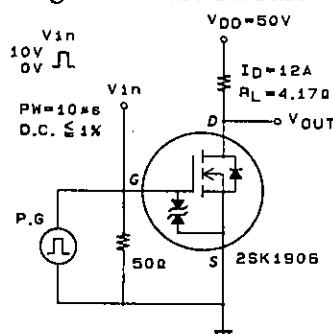
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Drain to Source Voltage	V_{DS}	100	V
Gate to Source Voltage	V_{GS}	± 15	V
Drain Current(DC)	I_D	20	A
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	80 A
Allowable Power Dissipation	P_D	2.0	W
		$T_c = 25^\circ\text{C}$	30 W
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

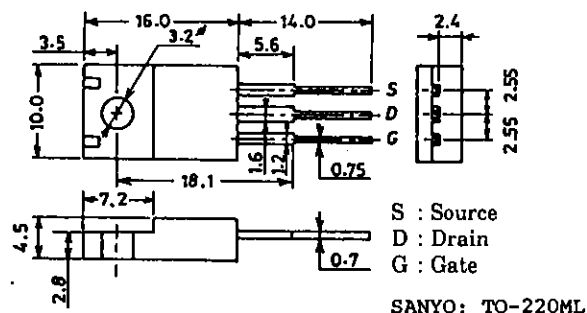
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}$, $V_{GS} = 0$	100			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}$, $V_{DS} = 0$	± 15			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 100\text{V}$, $V_{GS} = 0$			100	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12\text{V}$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$, $I_D = 1\text{mA}$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 12\text{A}$	15	24.5		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 12\text{A}$, $V_{GS} = 10\text{V}$		60	80	$\text{m}\Omega$
	$R_{DS(on)}$	$I_D = 12\text{A}$, $V_{GS} = 4\text{V}$		80	110	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = 20\text{V}$, $f = 1\text{MHz}$		1900		pF
Output Capacitance	C_{oss}	$V_{DS} = 20\text{V}$, $f = 1\text{MHz}$		300		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20\text{V}$, $f = 1\text{MHz}$		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}	$I_S = 20\text{A}$, $V_{GS} = 0$	1.0	1.5		V

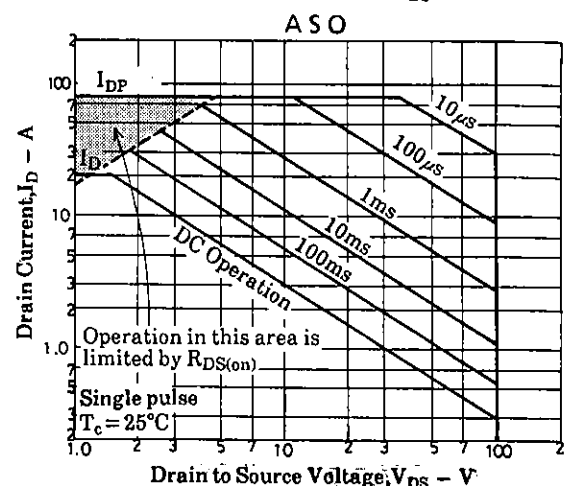
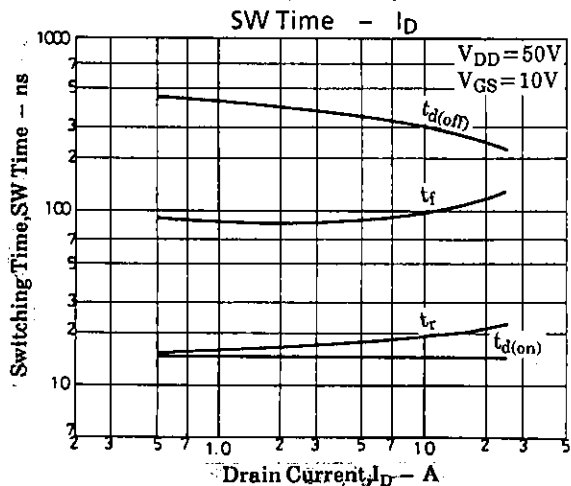
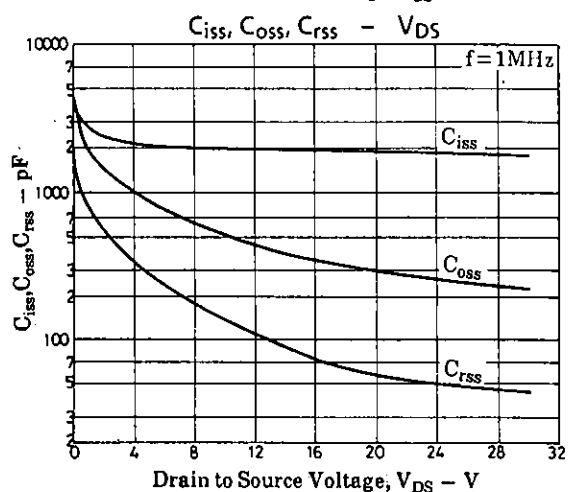
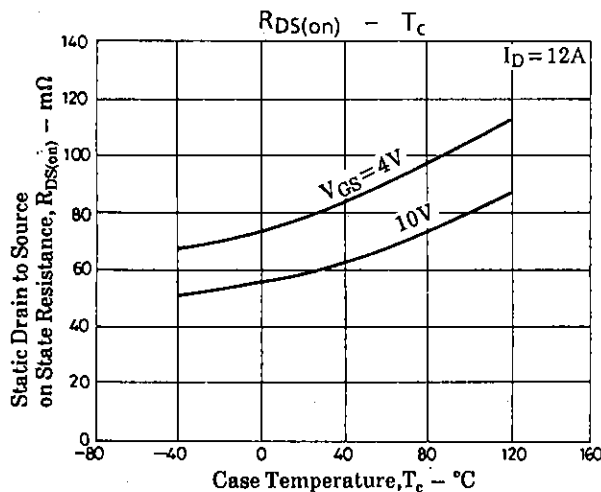
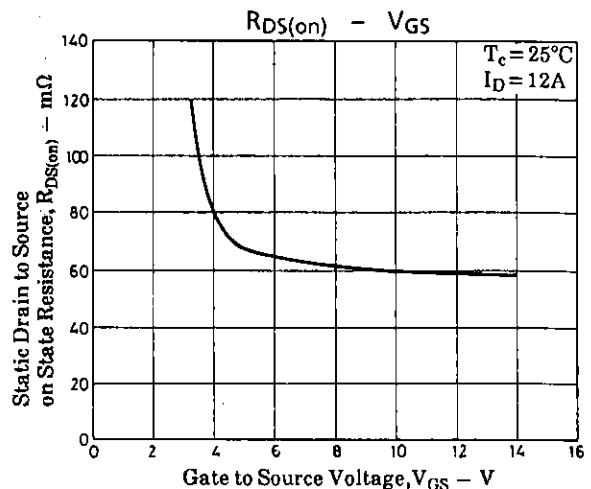
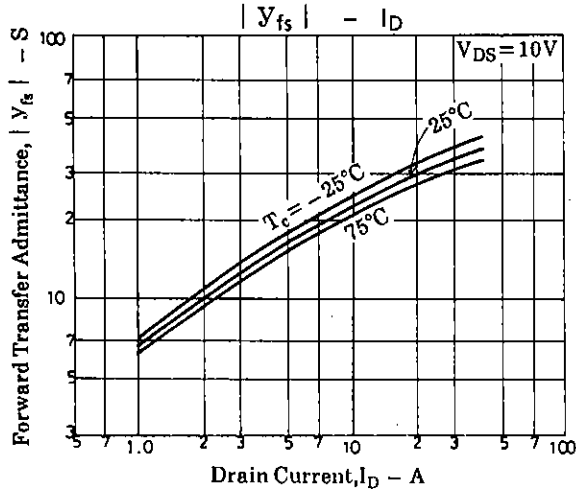
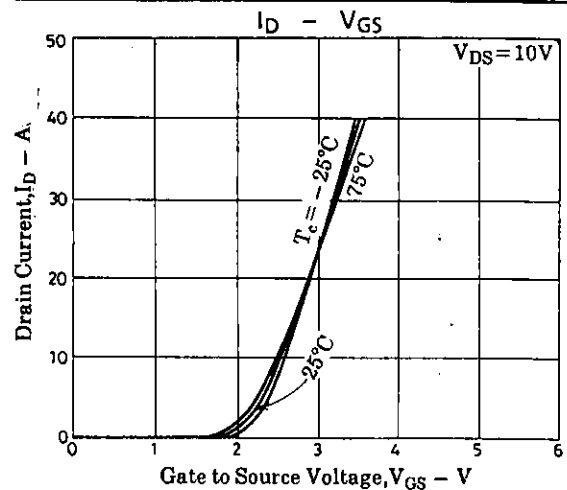
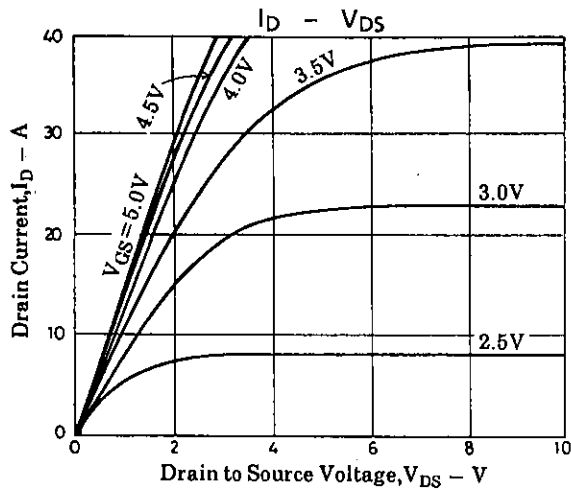
Switching Time Test Circuit

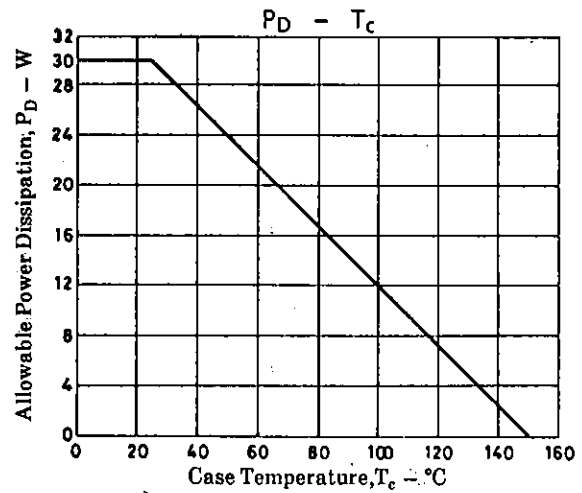
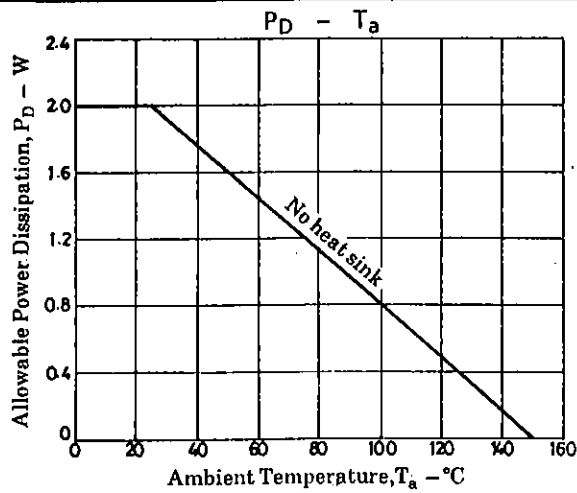


Package Dimensions 2063 (unit: mm)



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