Ordering number: EN 4617

SANYO

No.4617

2SK2083

N-Channel MOS Silicon FET

Very High-Speed Switching Applications

Features

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

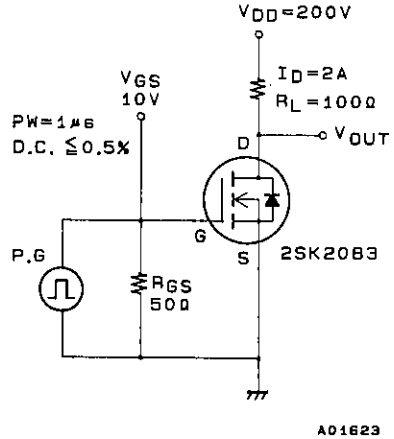
Absolute Maximum Ratings at Ta = 25°C

				unit
Drain-to-Source Voltage	V_{DSS}		900	V
Gate-to-Source Voltage	V_{GSS}		±30	V
Drain Current(DC)	I_D		5	A
Drain Current(Pulse)	I_{DP}	PW≦10μs, duty cycle≦1%	10	A
Allowable Power Dissipation	P_D	Tc=25°C	70	W
			1.65	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

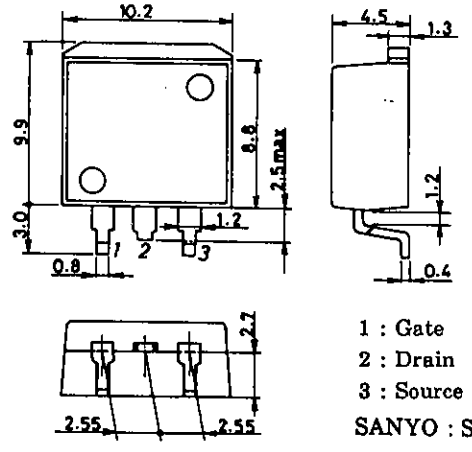
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0	900			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=900V, V_{GS}=0			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±30V, V_{DS}=0			±100	nA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D=1mA	2.0		3.0	V
Forward Transfer Admittance	$\|y_{fs}\|$	V_{DS}=20V, I_D=2A	1.0	2.0		S
Static Drain-to-Source On-state Resistance	$R_{DS(on)}$	I_D=2A, V_{GS}=10V		2.8	3.6	Ω
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		700		pF
Output Capacitance	Coss	V_{DS}=20V, f=1MHz		300		pF
Reverse Transfer Capacitance	Crss	V_{DS}=20V, f=1MHz		170		pF
Turn-ON Delay Time	$t_{d(on)}$	I_D=2A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50Ω		15		ns
Rise Time	t_r			35		ns
Turn-OFF Delay Time	$t_{d(off)}$			200		ns
Fall Time	t_f			65		ns
Diode Forward Voltage	V_{SD}	I_S=5A, V_{GS}=0			1.8	V

Switching Time Test Circuit



Package Dimensions 2090A

(unit: mm)



1 : Gate
2 : Drain
3 : Source
SANYO : SMP-FD

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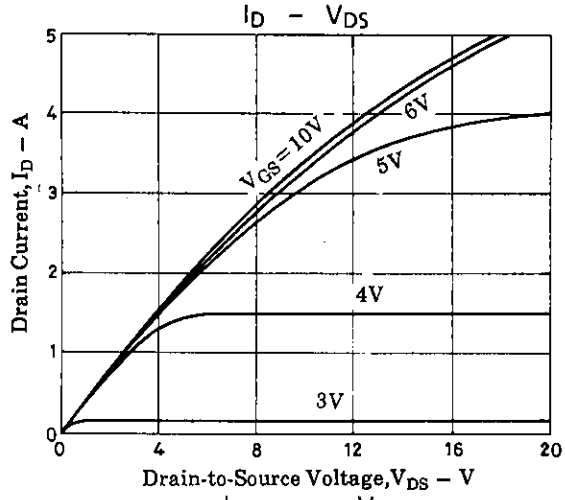
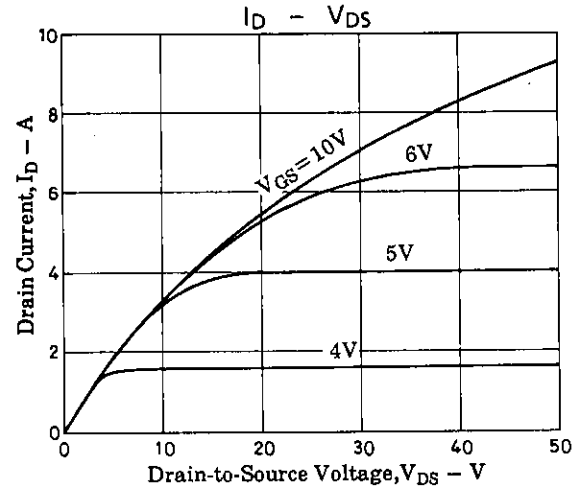
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

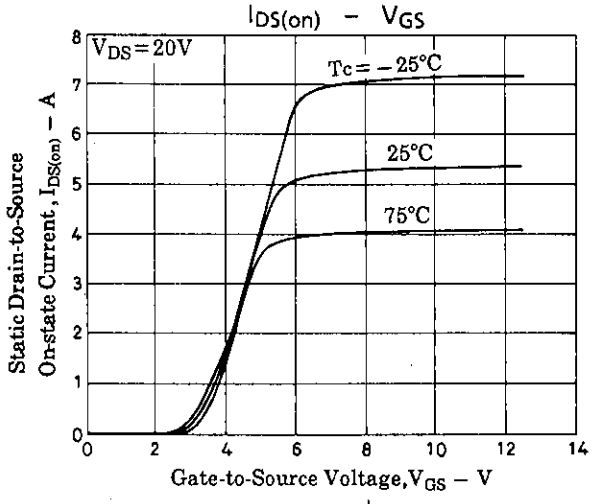
I_D – V_{DS}



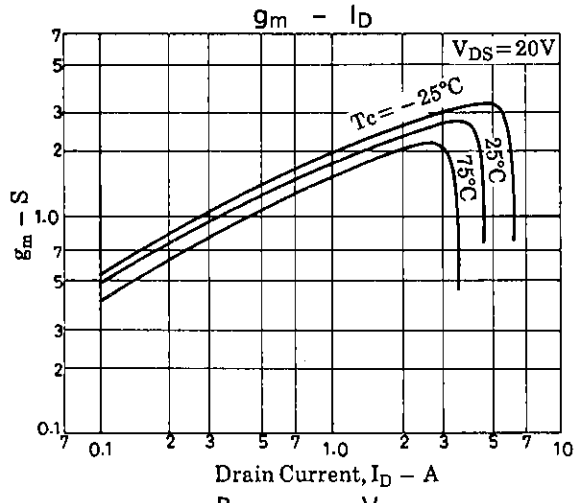
I_D – V_{DS}



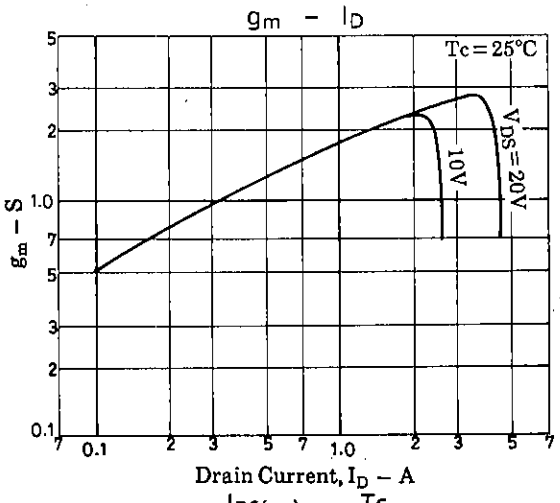
$I_{DS(on)}$ – V_{GS}



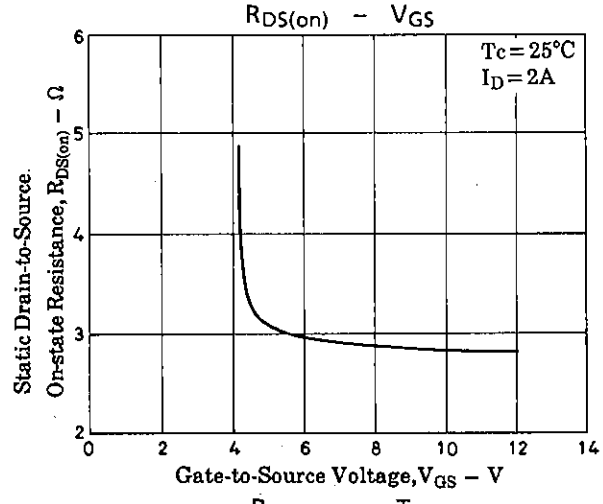
g_m – I_D



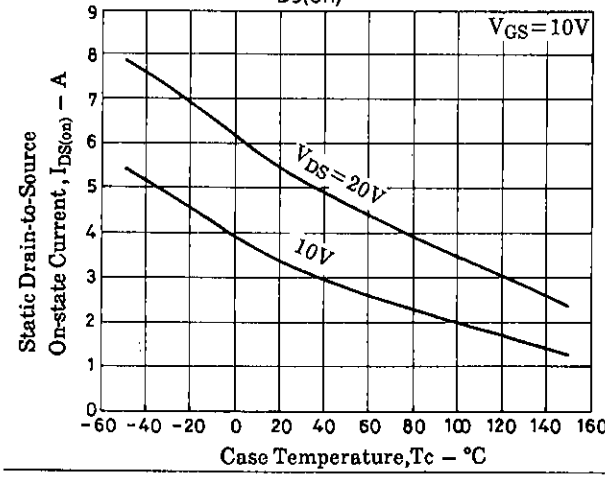
g_m – I_D



$R_{DS(on)}$ – V_{GS}



$I_{DS(on)}$ – Tc



$R_{DS(on)}$ – Tc