Ordering number: EN3824

SANYO

No.3824

2SK1729

N-Channel MOS Silicon FET

Very High-Speed Switching Applications

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Meets radial taping.

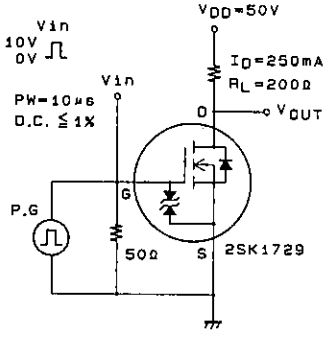
Absolute Maximum Ratings at Ta = 25°C

				unit
Drain to Source Voltage	V_{DSS}		100	V
Gate to Source Voltage	V_{GSS}		±15	V
Drain Current(DC)	I_D		0.5	A
Drain Current(Pulse)	I_{DP}	PW≦10μs, duty cycle≦1%	2	A
Allowable Power Dissipation	P_D		1	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

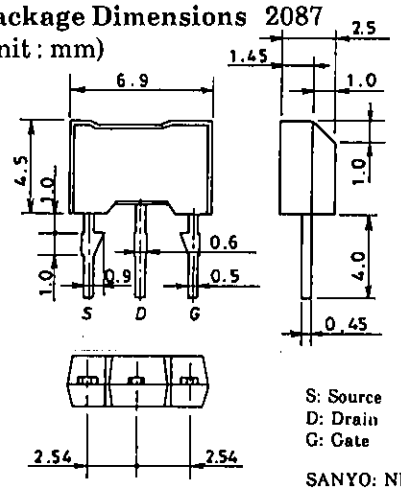
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0	100			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V, V_{GS}=0			100	μA
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±12V, V_{DS}=0			±10	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D=1mA	1.0		2.0	V
Forward Transfer Admittance	$\lvert y_{fs} \rvert$	V_{DS}=10V, I_D=250mA	400	700		mS
Static Drain to Source on State Resistance	$R_{DS(on)}$	I_D=250mA, V_{GS}=10V		2.7	3.5	Ω
	$R_{DS(on)}$	I_D=250mA, V_{GS}=4V		3.2	4.2	Ω
Input Capacitance	C_{iss}	V_{DS}=20V, f=1MHz		45		pF
Output Capacitance	C_{oss}	V_{DS}=20V, f=1MHz		15		pF
Reverse Transfer Capacitance	C_{rss}	V_{DS}=20V, f=1MHz		3		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		5		ns
Rise Time	t_r	〃		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	〃		35		ns
Fall Time	t_f	〃		25		ns
Diode Forward Voltage	V_{SD}	I_S=500mA, V_{GS}=0		1.0		V

Switching Time Test Circuit



Package Dimensions 2087

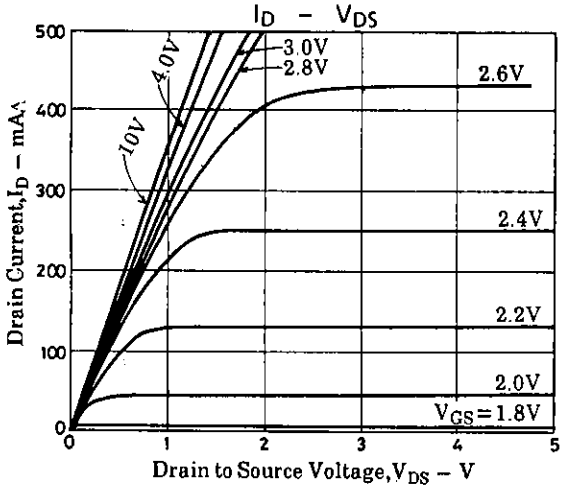
(unit : mm)



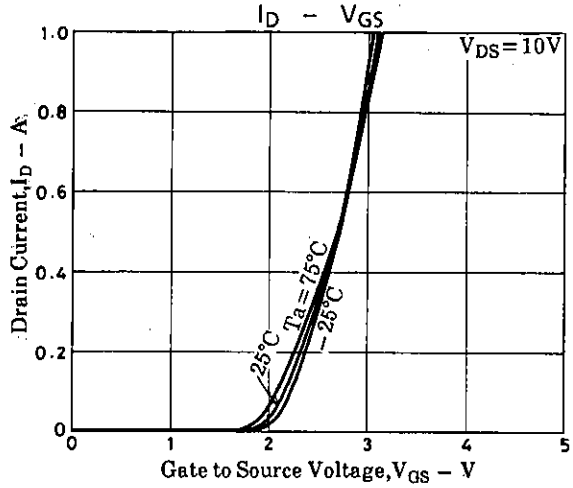
S: Source
D: Drain
G: Gate

SANYO: NMP

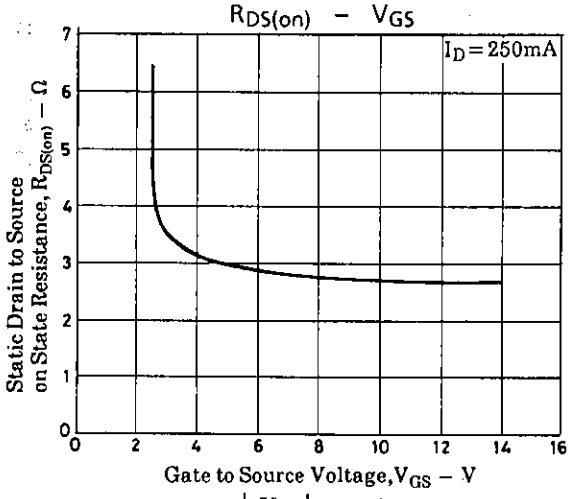
I_D – V_{DS}



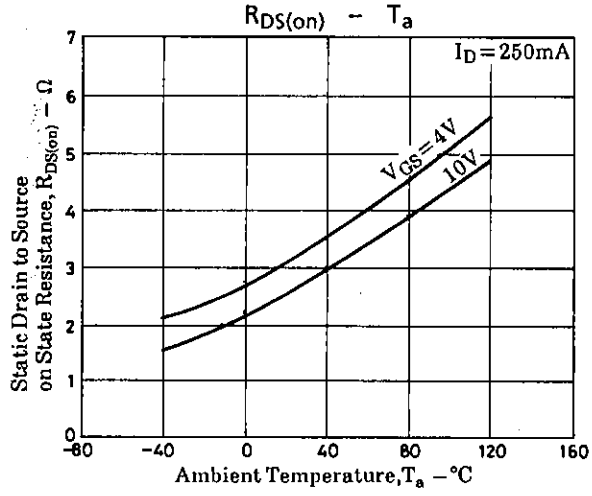
I_D – V_{GS}



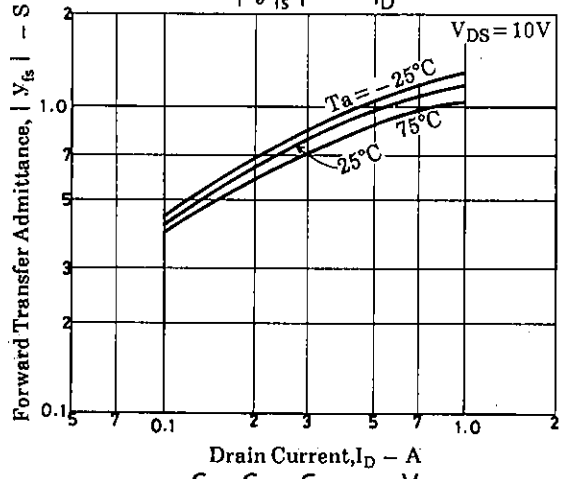
$R_{DS(on)}$ – V_{GS}



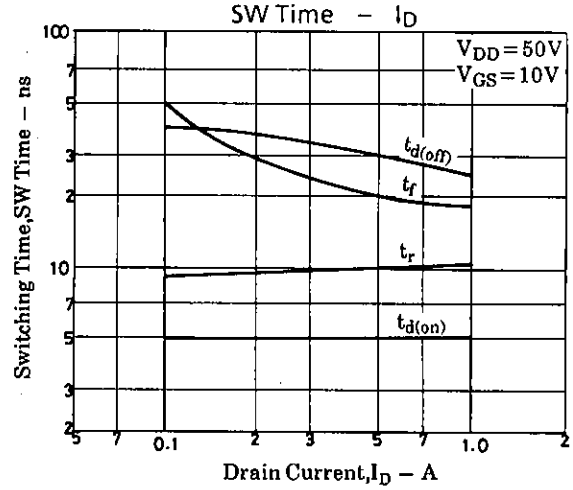
$R_{DS(on)}$ – Ta



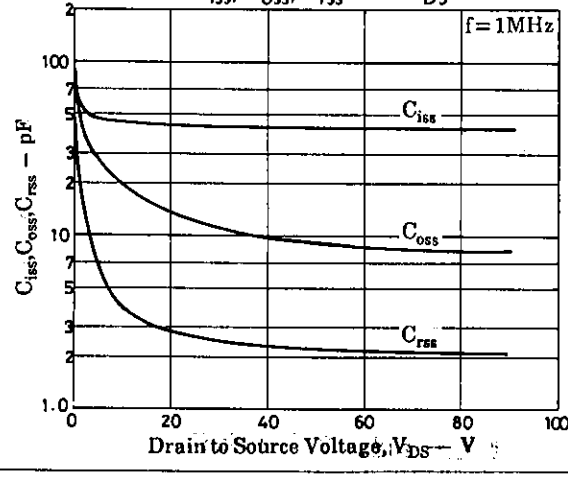
$|y_{fs}|$ – I_D



SW Time – I_D



C_{iss}, C_{oss}, C_{rss} – V_{DS}



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