

SANYO	No.4244A	2SK1920
		N-Channel MOS Silicon FET Very High-Speed Switching Applications

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.

Absolute Maximum Ratings at Ta = 25°C

Drain-to-Source Voltage	V_{DSS}		250	V	unit
Gate-to-Source Voltage	V_{GSS}		± 30	V	
Drain Current(DC)	I_D		4	A	
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s, \text{duty cycle} \leq 1\%$	16	A	
Allowable Power Dissipation	P_D		1.0	W	
		$T_c = 25^\circ C$	30	W	
Channel Temperature	T_{ch}		150	°C	
Storage Temperature	T_{stg}		-55 to +150	°C	

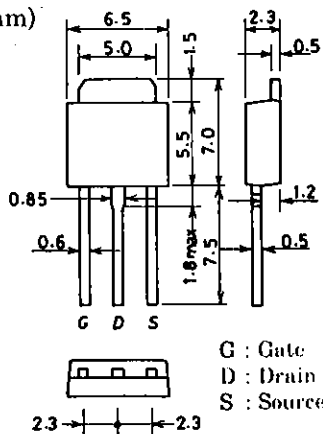
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	250			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu A, V_{DS} = 0$	± 30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 250V, V_{GS} = 0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 25V, V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	1.5		2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 2A$	2.5	4		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 2A, V_{GS} = 10V$	500	700		mΩ
Input Capacitance	C_{iss}	$V_{DS} = 20V, f = 1MHz$		420		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V, f = 1MHz$		95		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V, f = 1MHz$		30		pF

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Package Dimensions 2083A

(unit: mm)

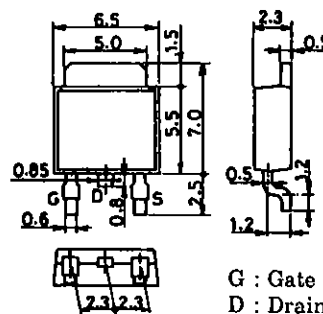


G : Gate
D : Drain
S : Source

SANYO: TP

Package Dimensions 2092A

(unit: mm)



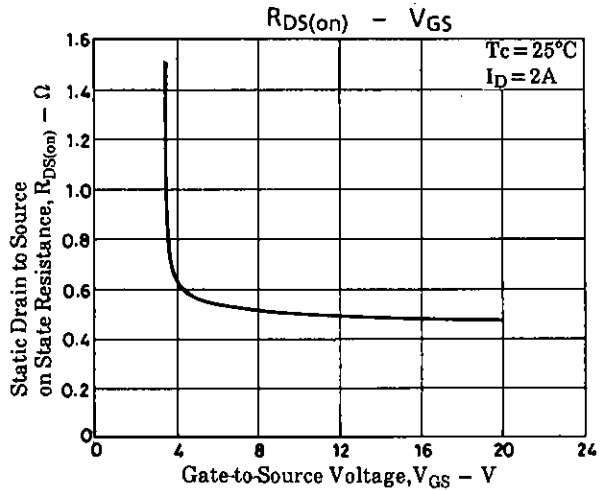
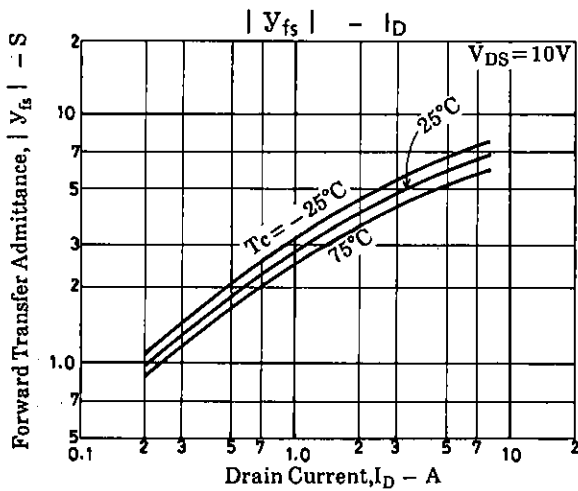
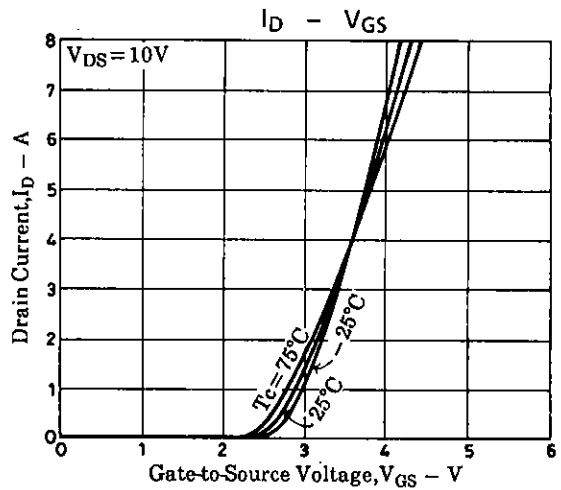
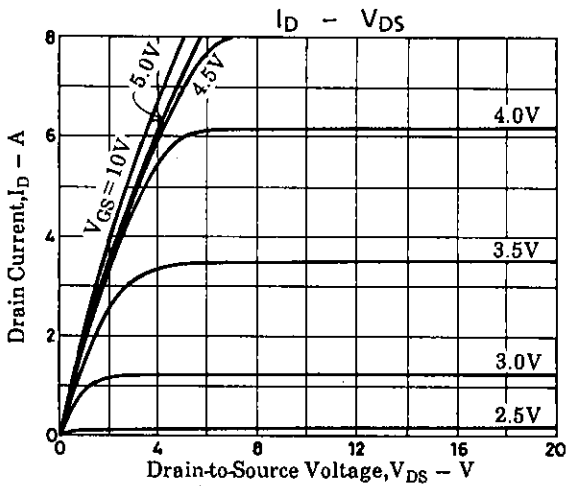
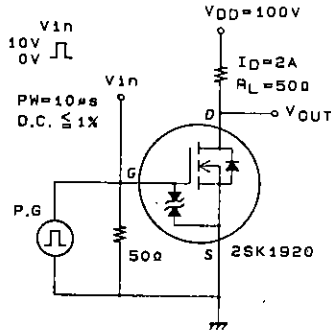
G : Gate
D : Drain
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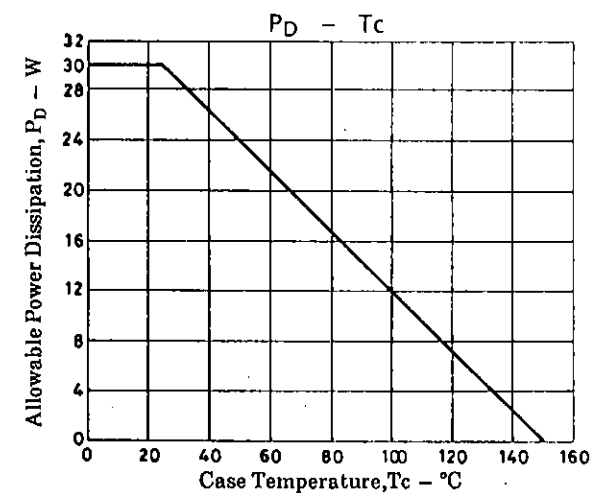
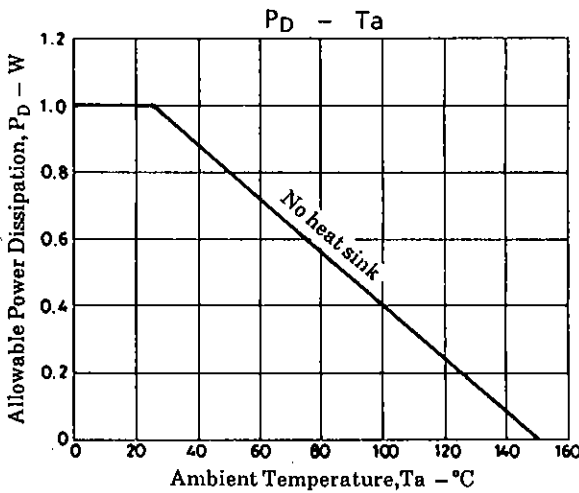
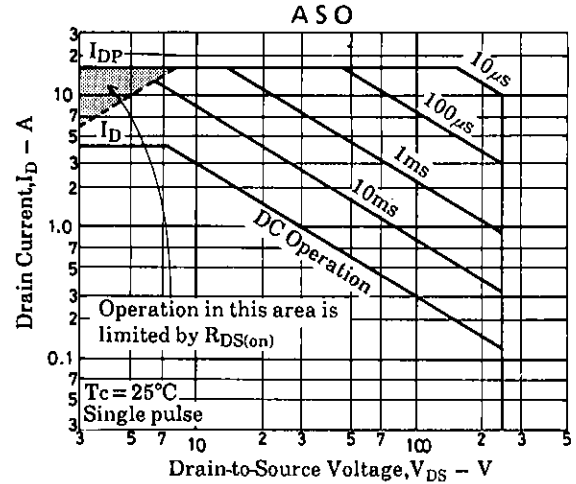
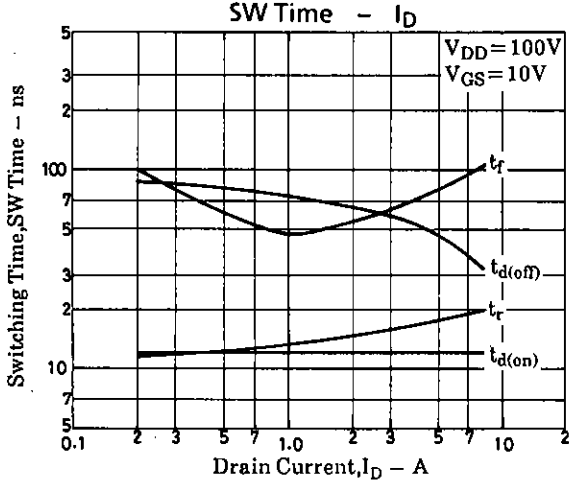
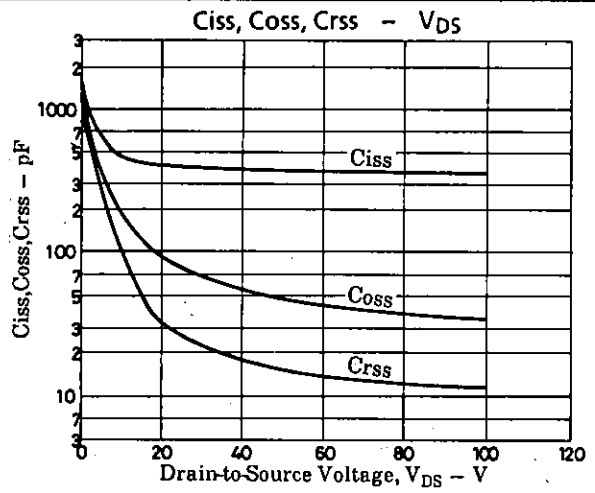
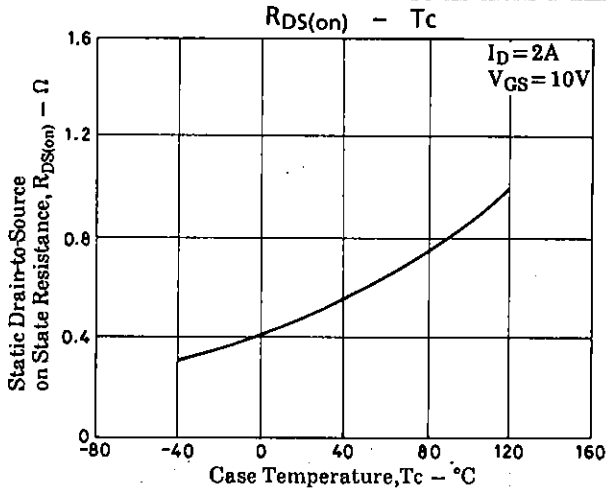
SANYO: TP-FA

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			min	typ	max	unit
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		12		ns
Rise Time	t_r	"		15		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		65		ns
Fall Time	t_f	"		55		ns
Diode Forward Voltage	V_{SD}	$I_S = 4A, V_{GS} = 0$	1.0	1.5		V

Switching Time Test Circuit





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