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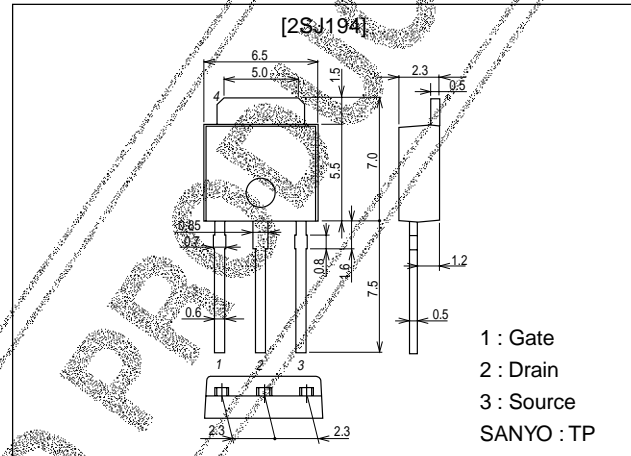
Ultrahigh-Speed Switching Applications

Features

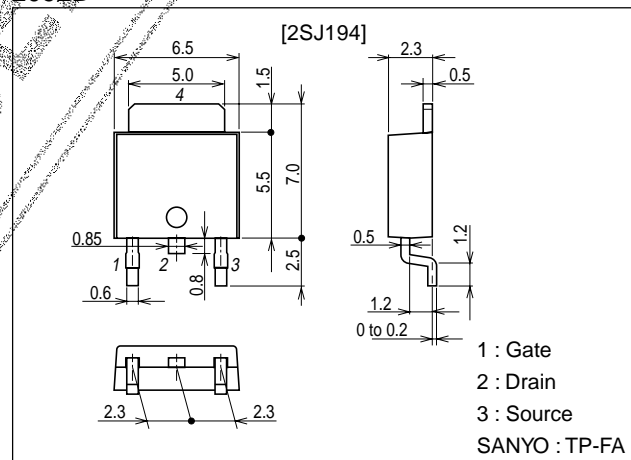
- Low ON resistance.
- Ultrahigh-speed switching.
- Low-voltage drive.

Package Dimensions

unit:mm
2083B



unit:mm
2092B



■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

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Specifications

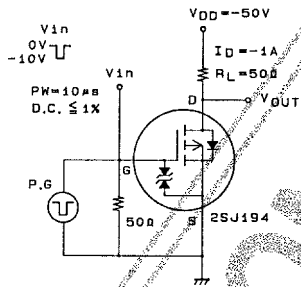
Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-100	V
Gate-to-Source Voltage	V_{GSS}		± 15	V
Drain Current (DC)	I_D		-2	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	-8	A
Allowable Power Dissipation	P_D	$T_c = 25^\circ C$	20	W
Channel Temperature	T_{ch}		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

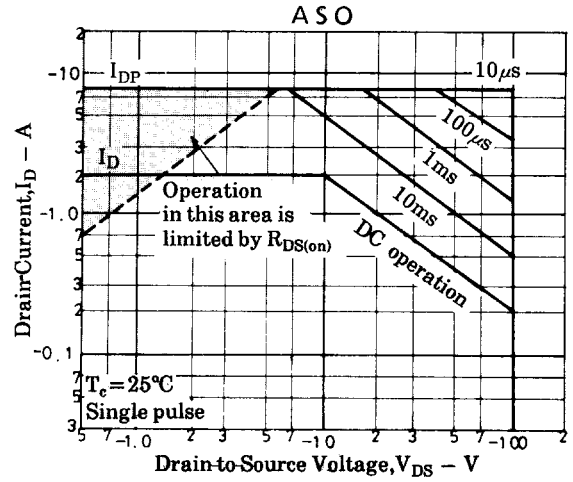
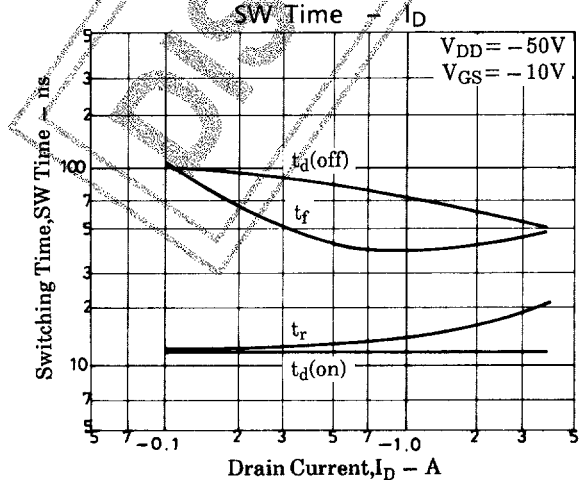
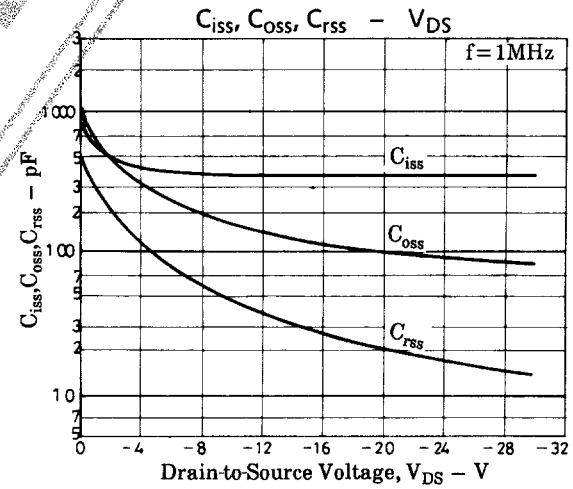
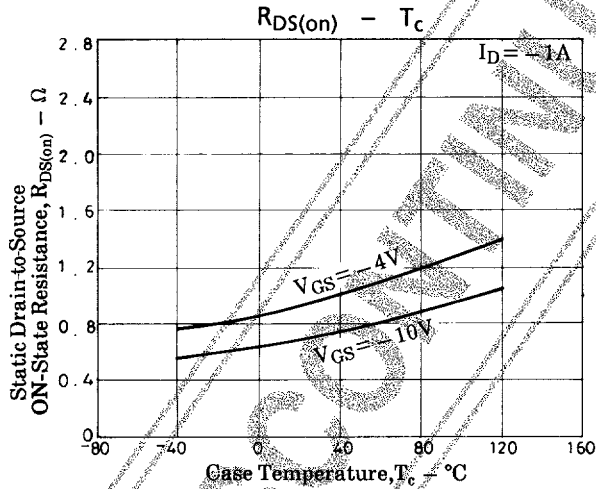
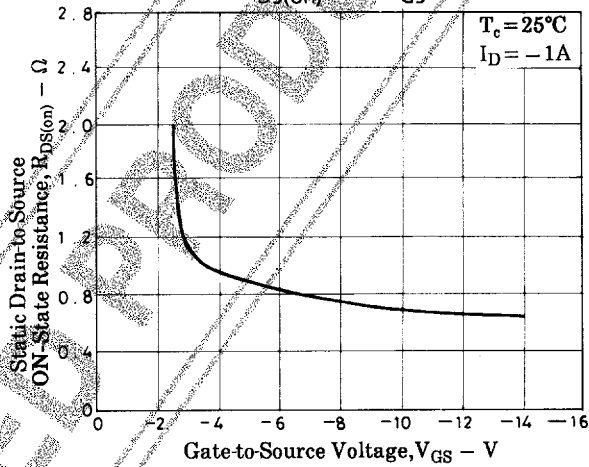
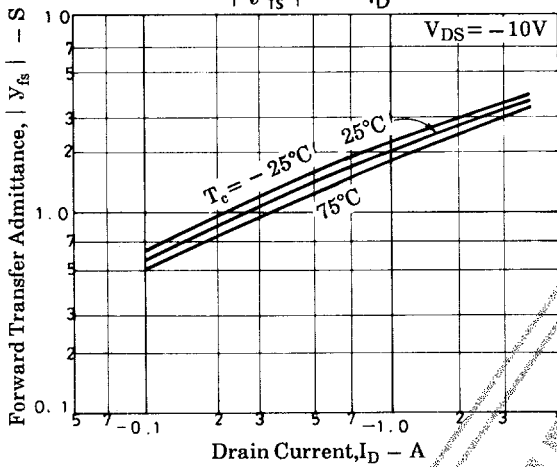
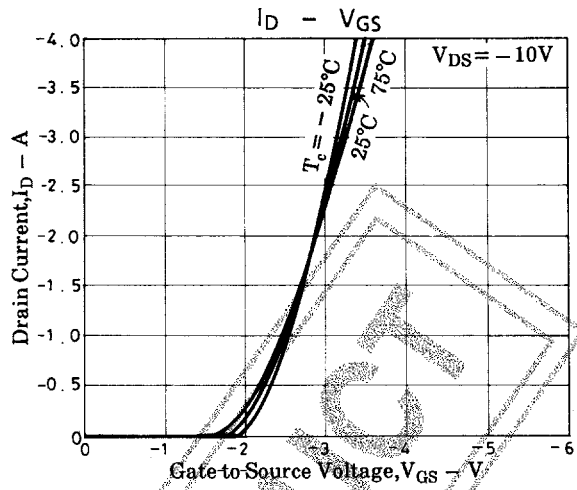
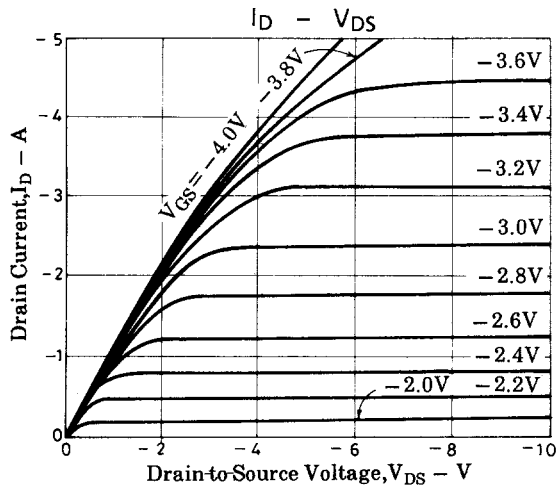
Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1mA, V_{GS} = 0$	-100			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu A, V_{DS} = 0$	± 15			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -100V, V_{GS} = 0$			-100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10V, I_D = -1mA$	-1.0		-2.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10V, I_D = -1A$	1.2	2		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = -1A, V_{GS} = -10V$		0.7	0.95	Ω
	$R_{DS(on)}$	$I_D = -1A, V_{GS} = -4V$		0.95	1.3	Ω
Input Capacitance	C_{iss}	$V_{DS} = -20V, f = 1MHz$		380		pF
Output Capacitance	C_{oss}	$V_{DS} = -20V, f = 1MHz$		100		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -20V, f = 1MHz$		20		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		12		ns
Rise Time	t_r	See specified Test Circuit		14		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		75		ns
Fall Time	t_f	See specified Test Circuit		40		ns
Diode Forward Voltage	V_{SD}	$I_S = -2A, V_{GS} = 0$		-1.0	-1.5	V

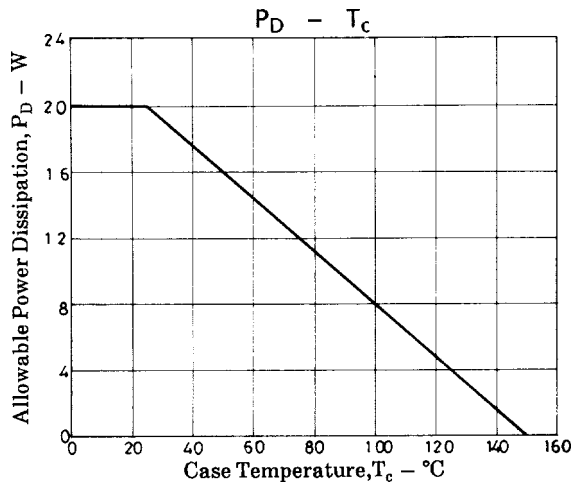
Switching Time Test Circuit



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