Ordering number:EN3767

P-Channel Silicon MOSFET

2SJ194

Ultrahigh-Speed Switching Applications

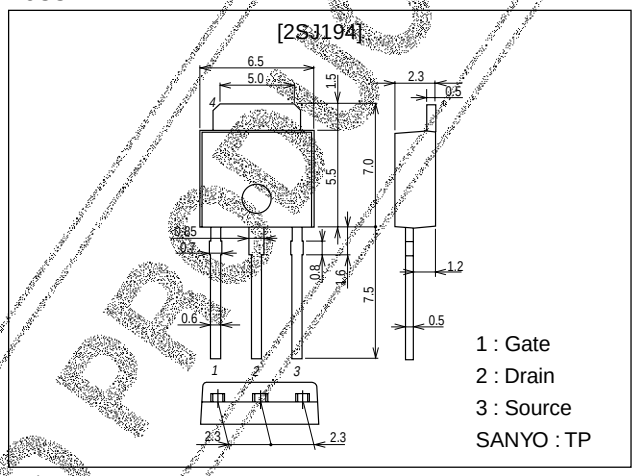
Features

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

Package Dimensions

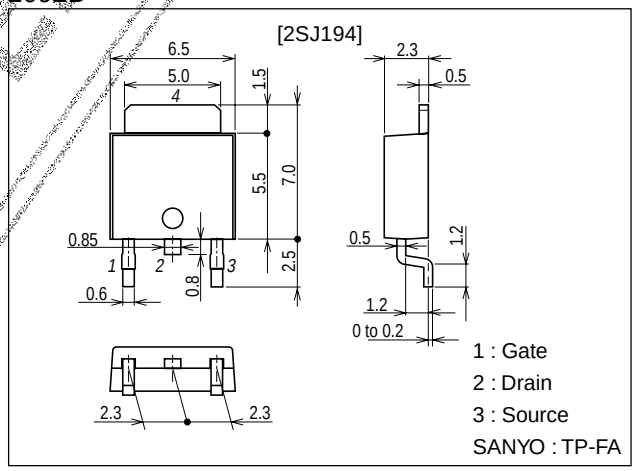
unit:mm

2083B



unit:mm

2092B



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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≤10μs, duty cycle≤1%	–8	A
Allowable Power Dissipation	P_D	Tc=25˚C	20	W
Channel Temperature	Tch		150	˚C
Storage Temperature	Tstg		–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=±100μA, 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}=±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	| yfs |	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	Ciss	V_{DS}=–20V, f=1MHz		380		pF
Output Capacitance	Coss	V_{DS}=–20V, f=1MHz		100		pF
Reverse Transfer Capacitance	Crss	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