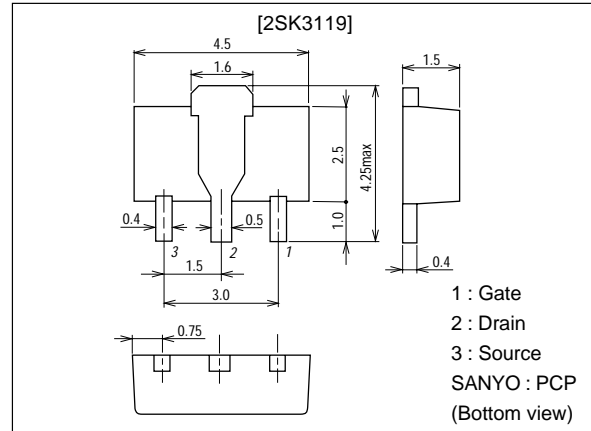


**2SK3119****Ultrahigh-Speed Switching Applications****Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- 2.5V drive.

Package Dimensions

unit:mm
2062A

**Specifications****Absolute Maximum Ratings** at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		20	V
Gate-to-Source Voltage	V_{GSS}		± 10	V
Drain Current (DC)	I_D		2	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	8	A
Allowable Power Dissipation	P_D	$T_c = 25^\circ\text{C}$	3.5	W
		Mounted on a ceramic board (250mm \times 0.8mm)	1.3	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}$, $V_{GS} = 0$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20\text{V}$, $V_{GS} = 0$			10	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 8\text{V}$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$, $I_D = 1\text{mA}$	0.4		1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 1\text{A}$	2.0	2.8		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = 1\text{A}$, $V_{GS} = 4\text{V}$		200	300	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D = 200\text{mA}$, $V_{GS} = 2.5\text{V}$		300	480	$\text{m}\Omega$

Marking : KS

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■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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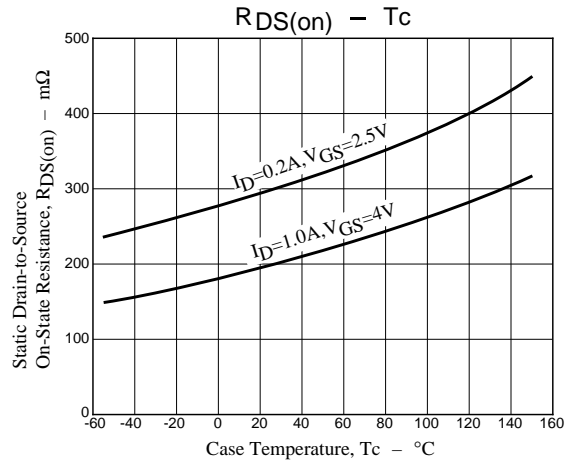
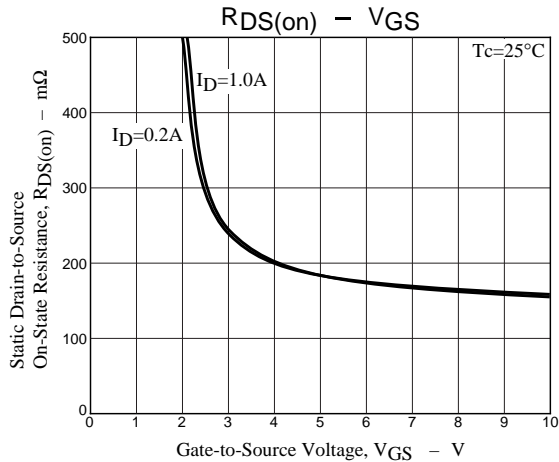
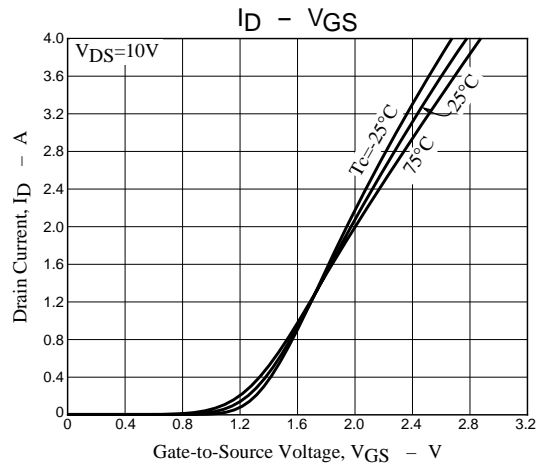
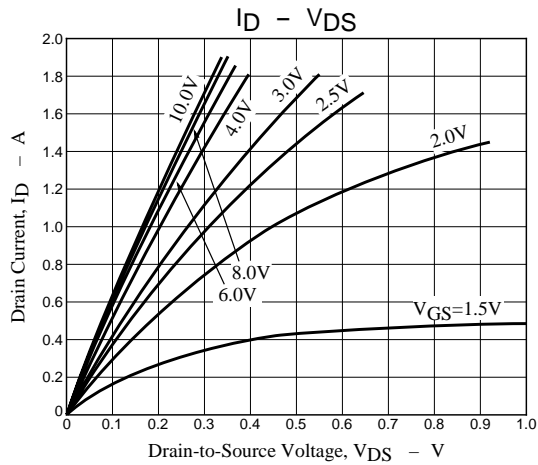
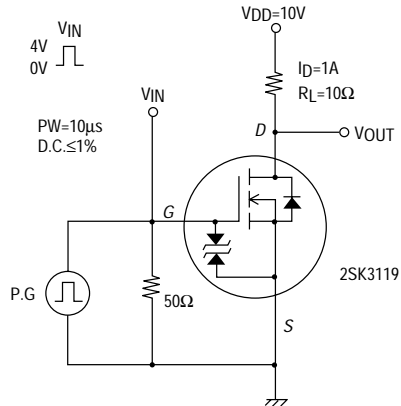
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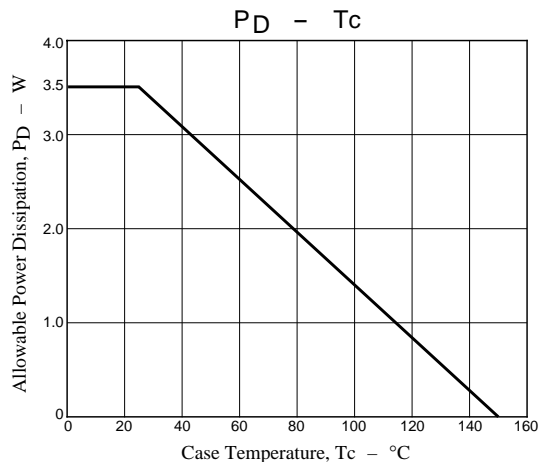
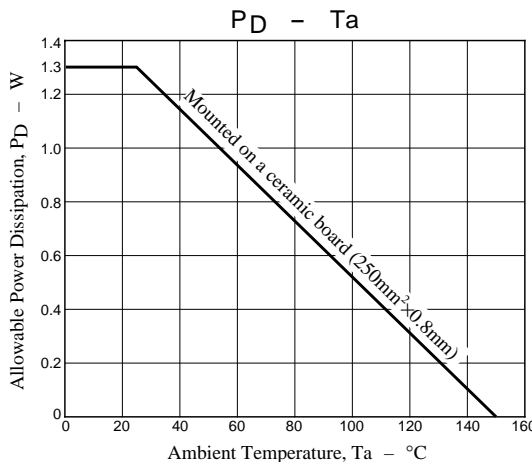
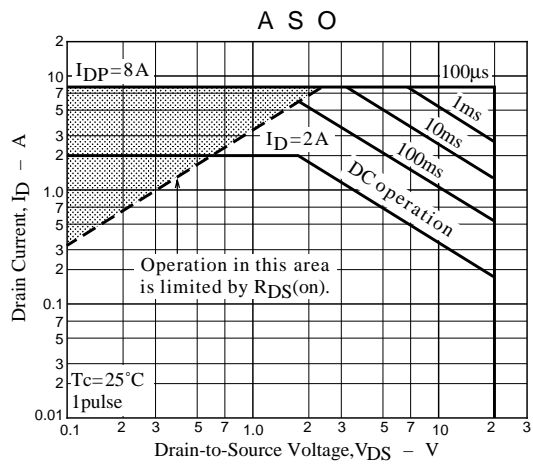
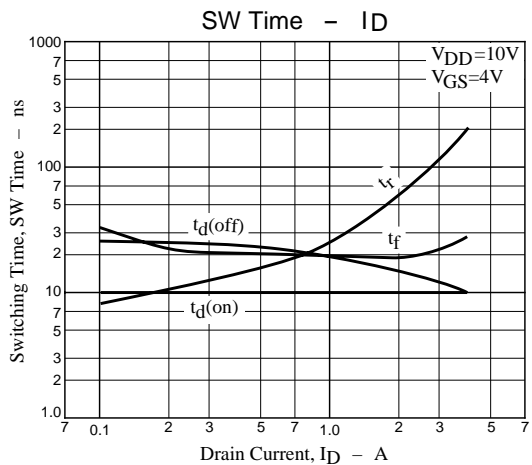
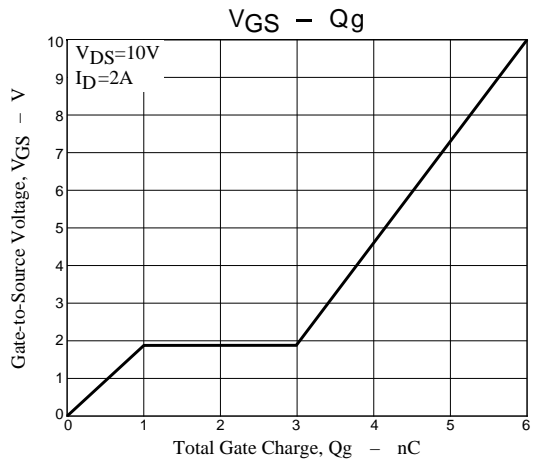
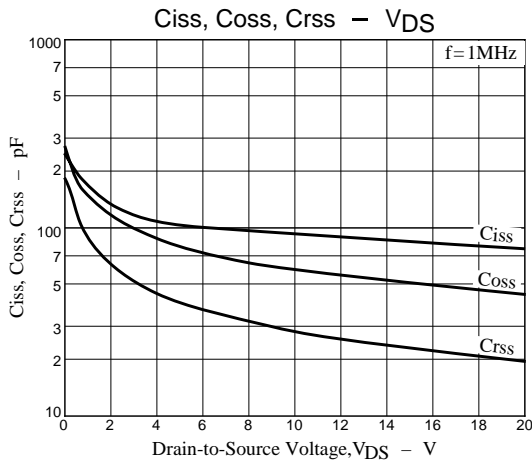
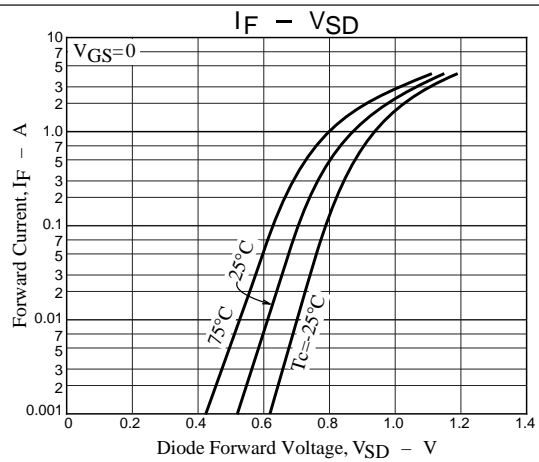
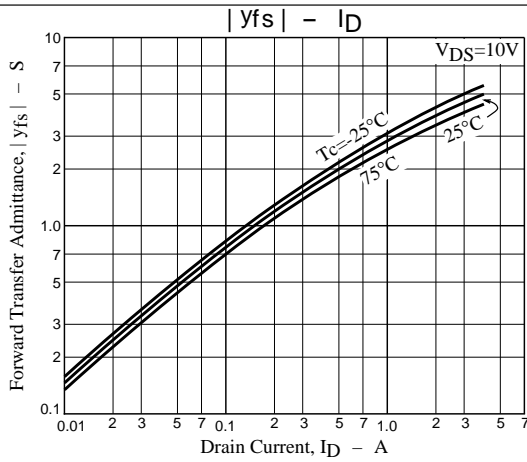
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	C_{iss}	$V_{DS}=10V, f=1MHz$		90		pF
Output Capacitance	C_{oss}	$V_{DS}=10V, f=1MHz$		60		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V, f=1MHz$		28		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	t_r	See specified Test Circuit		25		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		20		ns
Fall Time	t_f	See specified Test Circuit		20		ns
Total Gate Charge	Q_g	$V_{DS}=10V, V_{GS}=10V, I_D=2A$		6		nC
Gate-to-Source Charge	Q_{gs}			1		nC
Gate-to-Drain "Miller" Charge	Q_{gd}			2		nC
Diode Forward Voltage	V_{SD}	$I_S=2A, V_{GS}=0$		1.0	1.2	V

Switching Time Test Circuit



2SK3119



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