



# 2SK2919

## Ultrahigh-Speed Switching Applications

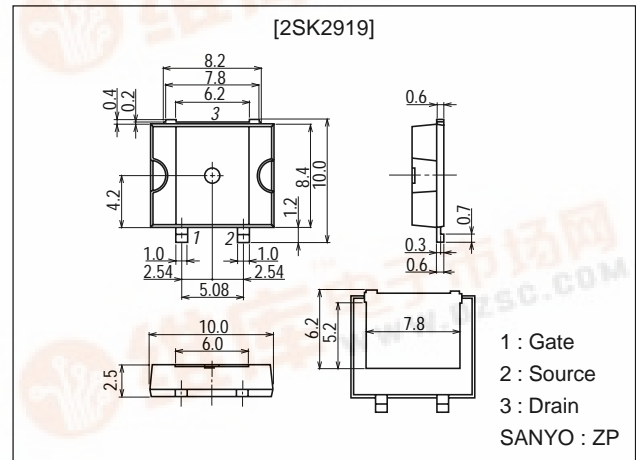
### Features

- Low ON resistance.
- Ultrahigh-speed switching.
- On-chip high-speed diode ( $t_{tr}=100ns$ ).

### Package Dimensions

unit:mm

2128



### Specifications

Absolute Maximum Ratings at  $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		600	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 30$	V
Drain Current (DC)	$I_D$		2	A
Drain Current (Pulse)	$I_{DP}$		8	A
Allowable Power Dissipation	$P_D$	$T_c=25^\circ C$	35	W
Channel Temperature	$T_{ch}$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

Electrical Characteristics at  $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=10mA, V_{GS}=0$	600			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=480V, V_{GS}=0$			1.0	mA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 30V, V_{DS}=0$			$\pm 100$	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	2.0		3.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=1A$	0.8	1.5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=1A$		3.2	4.3	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		400		pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$		55		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$		15		pF

Note ) Be careful in handling the 2SK2919 because it has no protection diode between Gate-to-Source.

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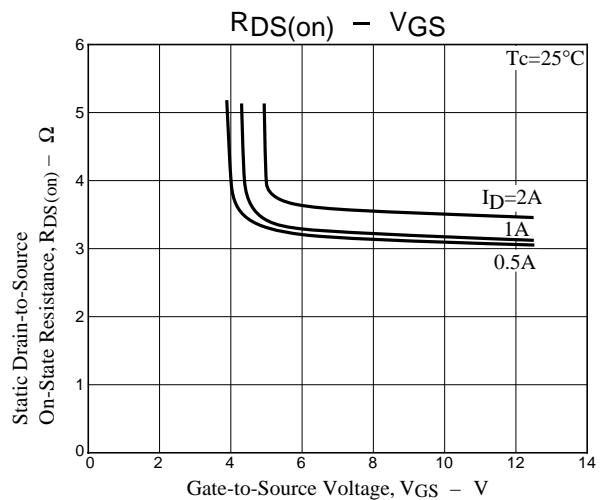
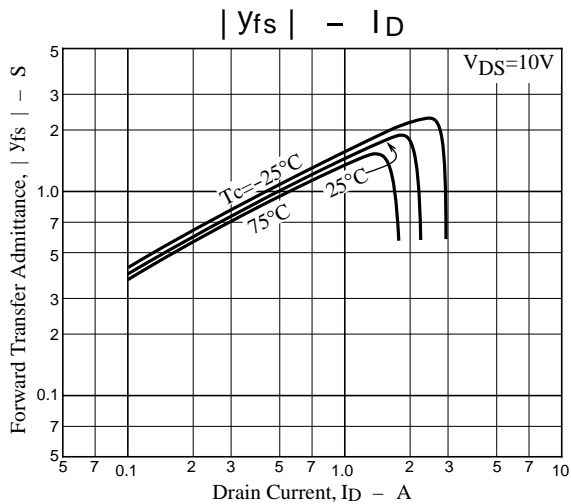
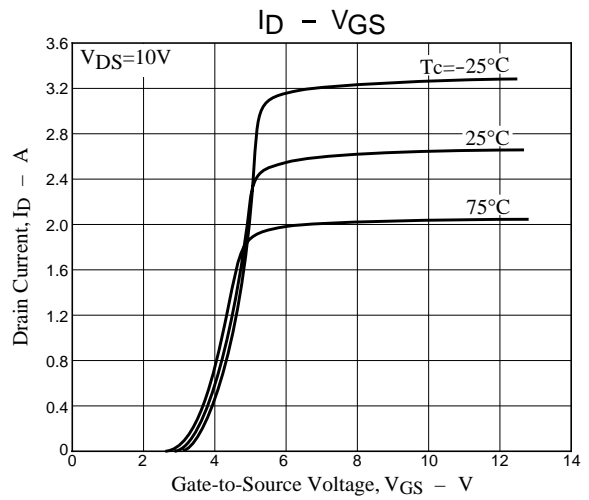
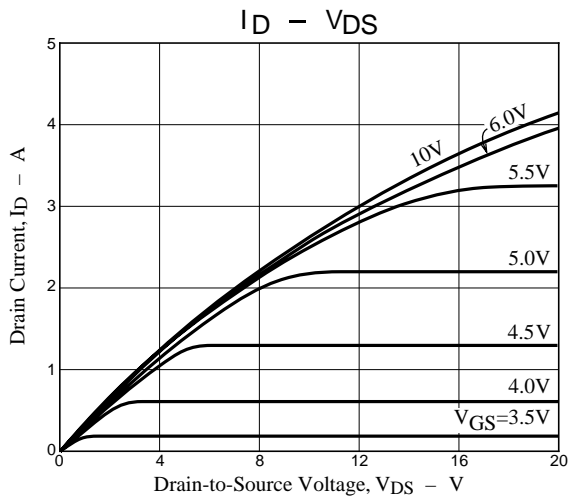
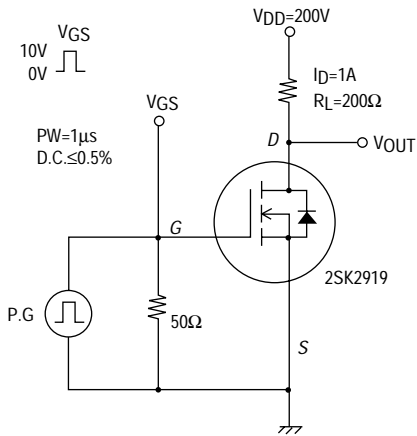


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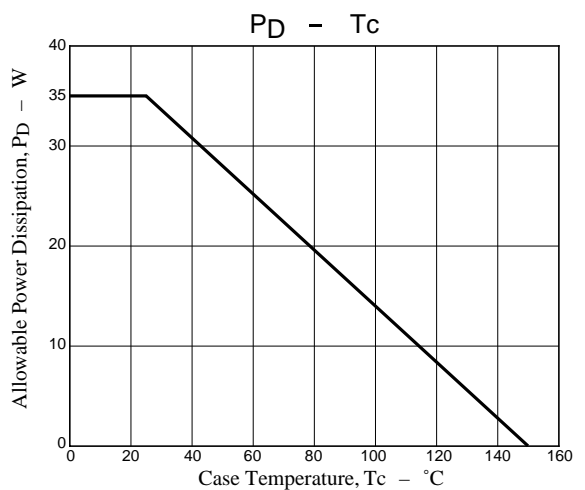
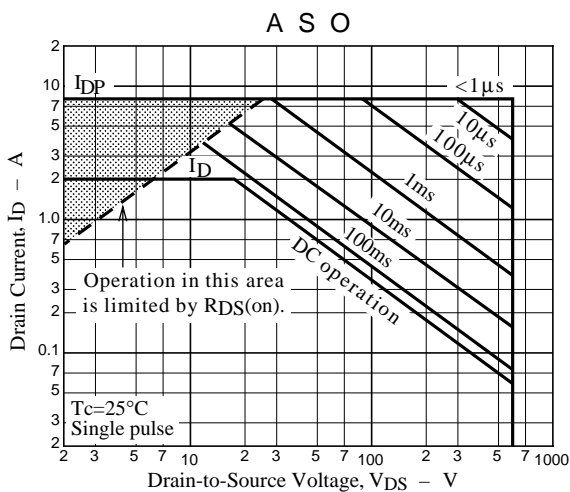
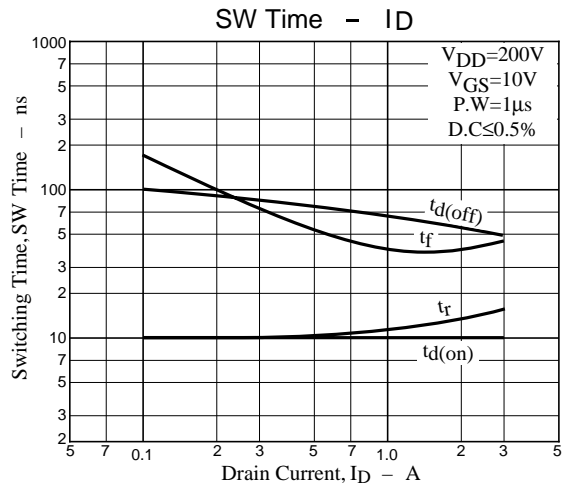
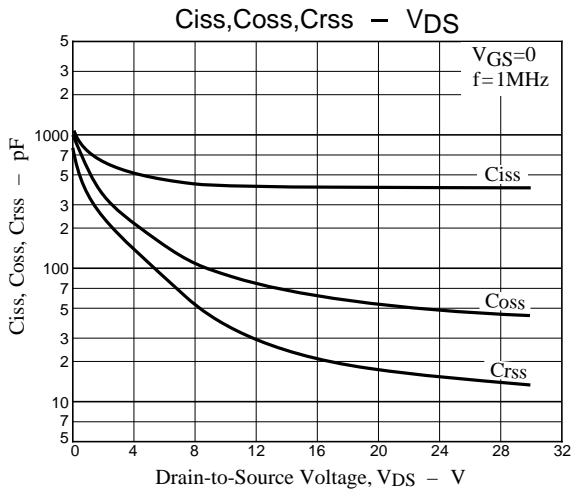
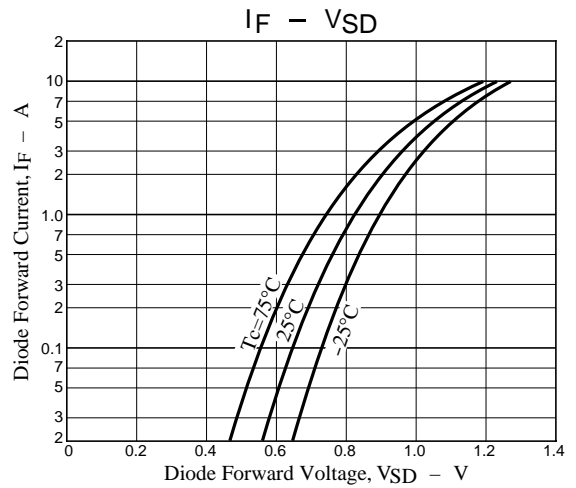
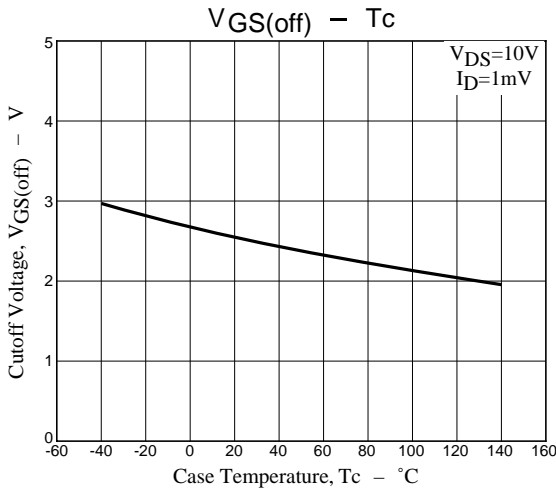
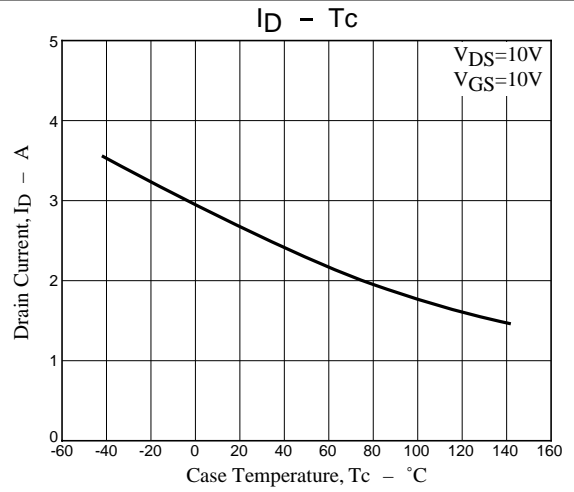
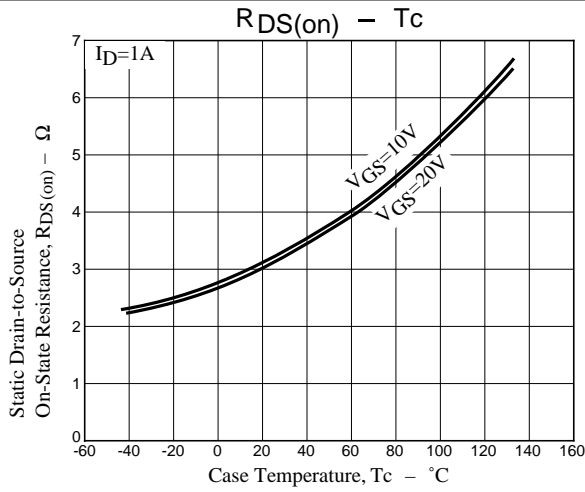
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	$t_r$	See specified Test Circuit		12		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		65		ns
Fall Time	$t_f$	See specified Test Circuit		40		ns
Diode Forward Voltage	$V_{SD}$	$I_S=2A, V_{GS}=0$			1.5	V
Diode Reverse recovery time	$t_{rr}$	$I_S=2A, di/dt=100A/\mu s$		100		ns

## Switching Time Test Circuit



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