

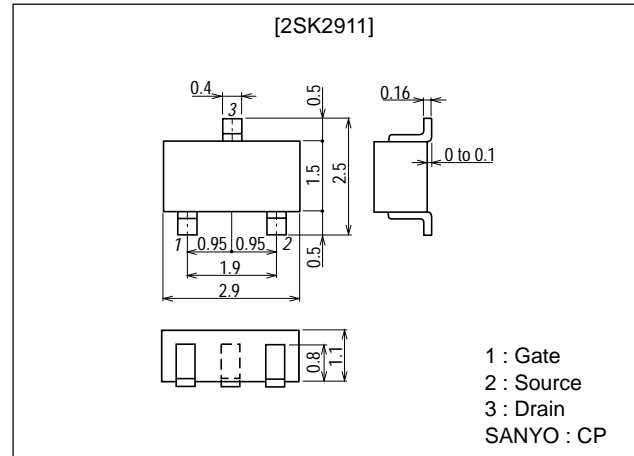
**SANYO****Ultrahigh-Speed Switching Applications****Features**

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

**Package Dimensions**

unit:mm

2091A

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		100	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 10$	V
Drain Current (DC)	$I_D$		0.25	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu\text{s}$ , duty cycle $\leq 1\%$	1	A
Allowable Power Dissipation	$P_D$		0.25	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	$V_{(BR)DSS}$	$I_D=1\text{mA}$ , $V_{GS}=0$	100			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=100\text{V}$ , $V_{GS}=0$			100	$\mu\text{A}$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 8\text{V}$ , $V_{DS}=0$			$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$	0.5		1.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$ , $I_D=150\text{mA}$	250	500		mS
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=0.15\text{A}$ , $V_{GS}=4\text{V}$		2.5	3.5	$\Omega$
	$R_{DS(on)2}$	$I_D=0.1\text{A}$ , $V_{GS}=2.5\text{V}$		3.0	4.2	$\Omega$

Marking : FK

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**SANYO Electric Co.,Ltd. Semiconductor Company**

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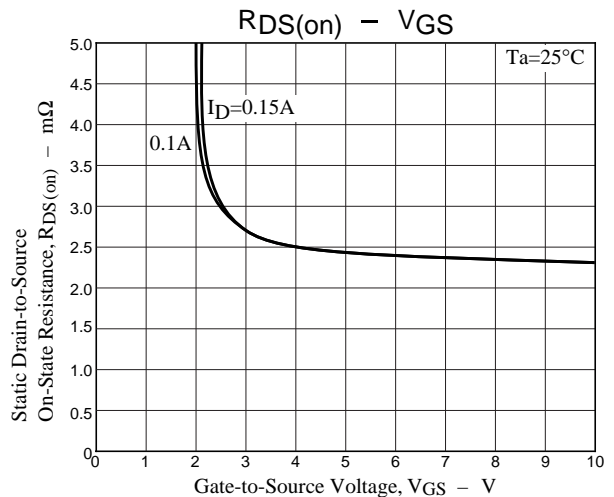
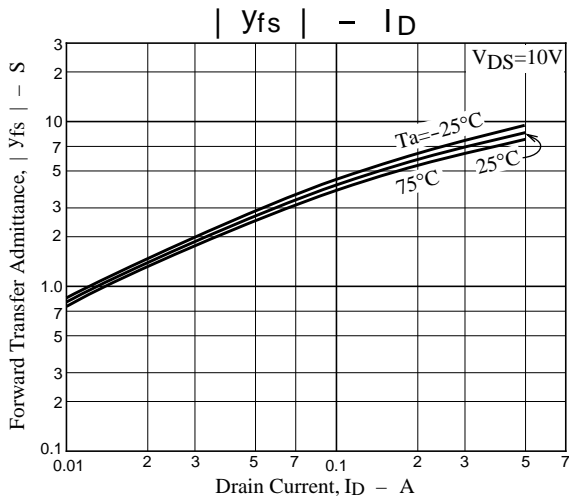
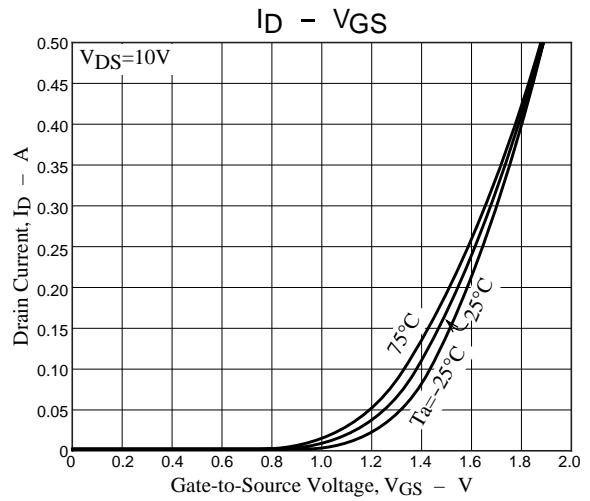
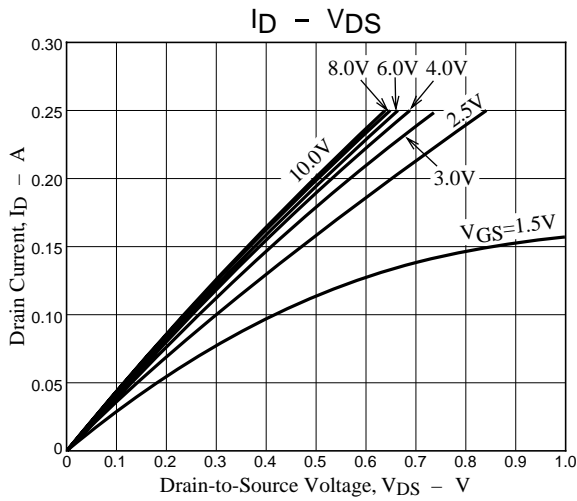
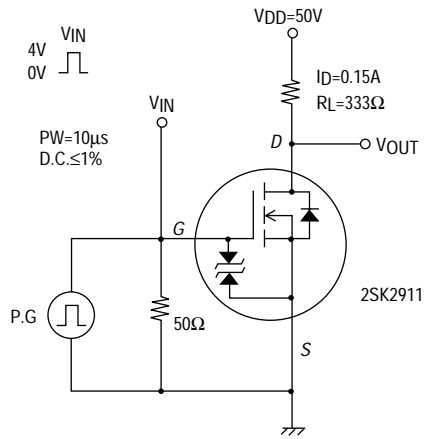
# 2SK2911

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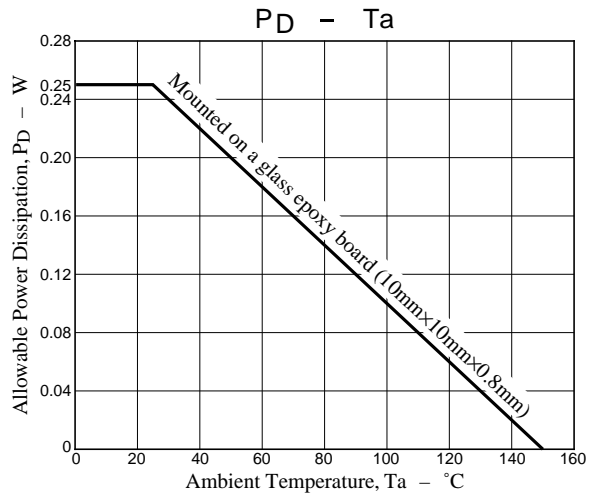
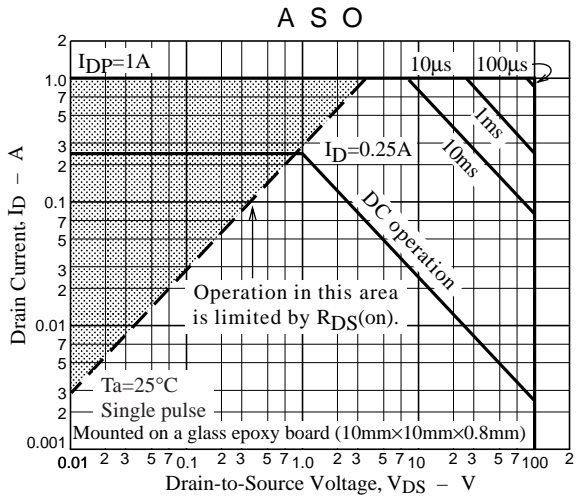
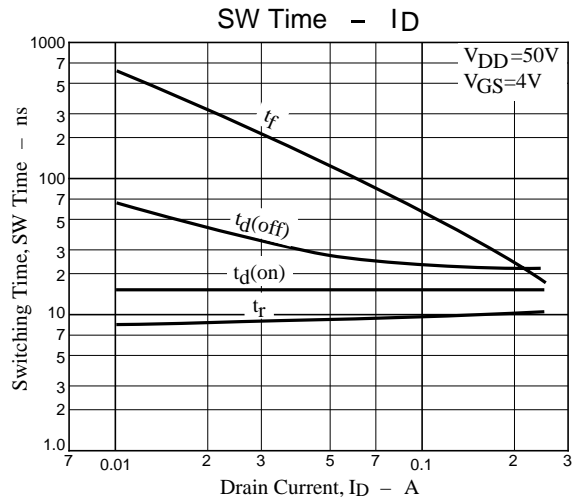
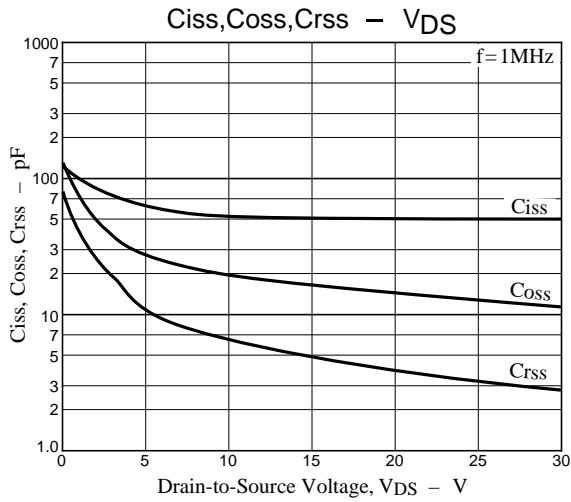
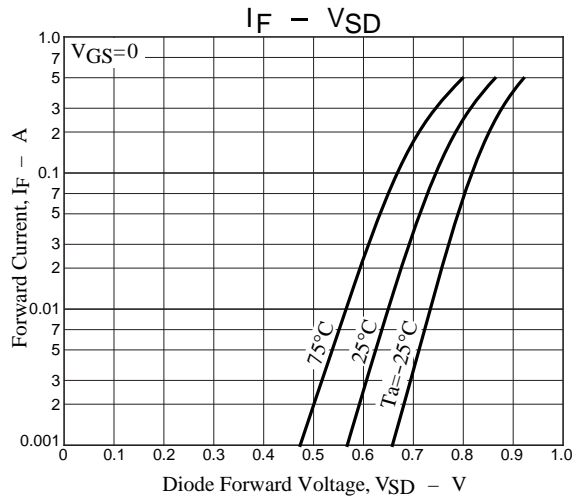
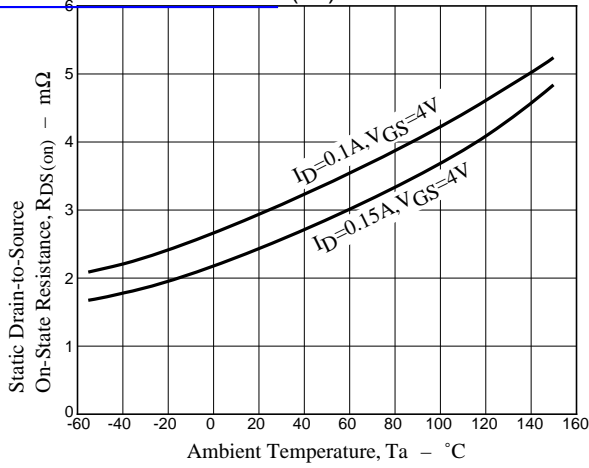
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		50		pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$		15		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$		4		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		15		ns
Rise Time	$t_r$	See specified Test Circuit		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		25		ns
Fall Time	$t_f$	See specified Test Circuit		35		ns
Diode Forward Voltage	$V_{SD}$	$I_S=250mA, V_{GS}=0$		0.8	1.2	V

## Switching Time Test Circuit



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