

**2SK2910**

Ultrahigh-Speed Switching Applications

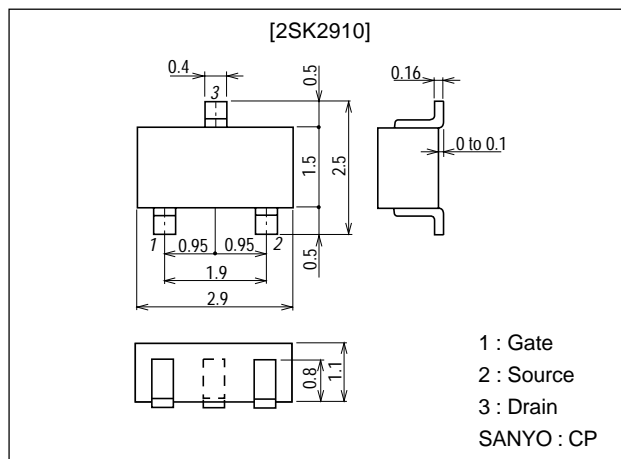
Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 4V 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_{DS}		30	V
Gate-to-Source Voltage	V_{GS}		± 20	V
Drain Current (DC)	I_D		0.8	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	3.2	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	$V_{(BR)DSS}$	$I_D = 1\text{mA}$, $V_{GS} = 0$	30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30\text{V}$, $V_{GS} = 0$			10	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16\text{V}$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$, $I_D = 1\text{mA}$	1.0		2.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 400\text{mA}$	0.5	1.6		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = 400\text{mA}$, $V_{GS} = 10\text{V}$		230	300	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D = 400\text{mA}$, $V_{GS} = 4\text{V}$		350	480	$\text{m}\Omega$

Marking : EK

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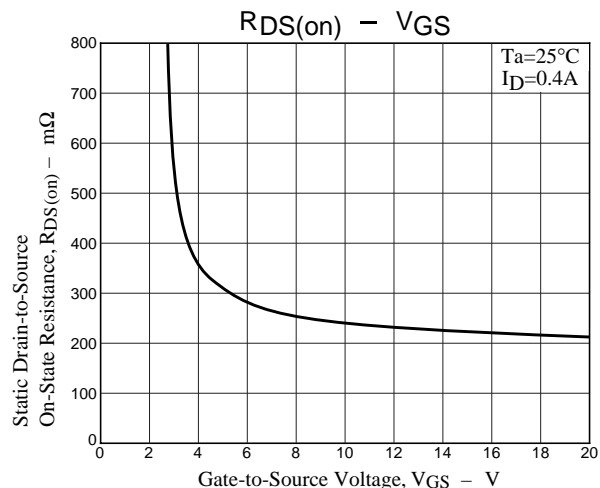
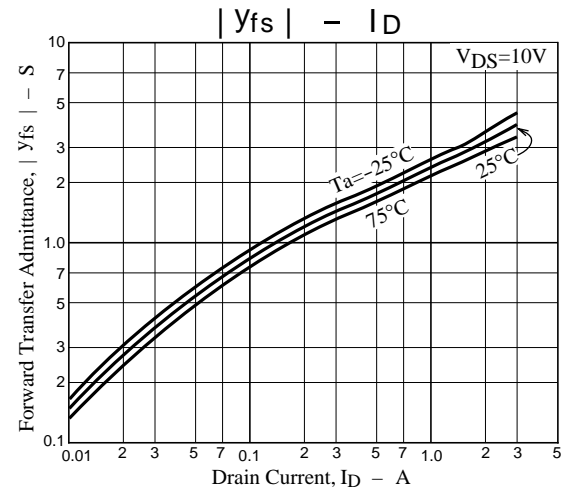
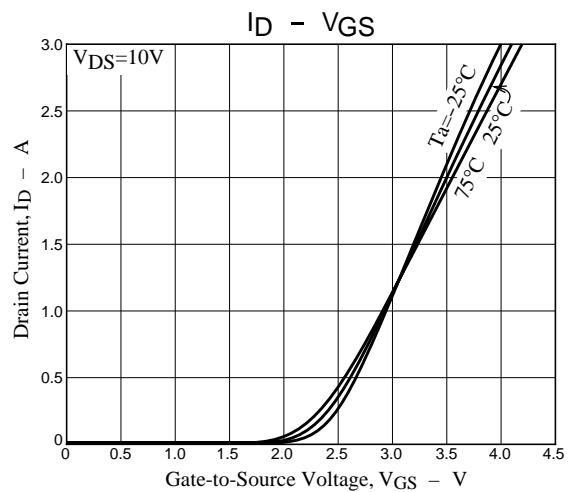
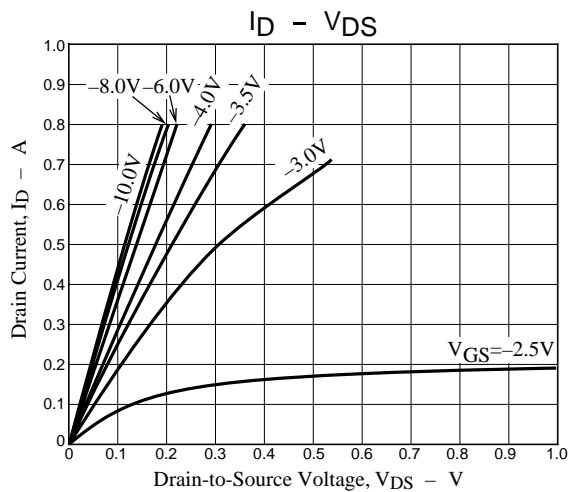
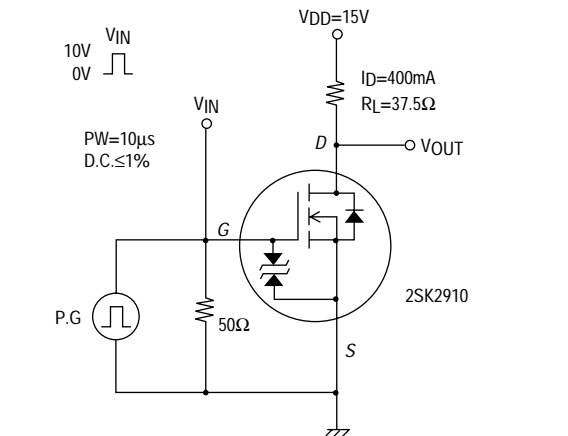
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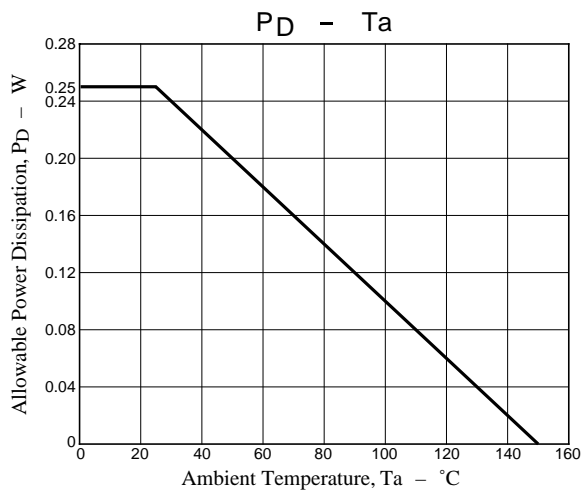
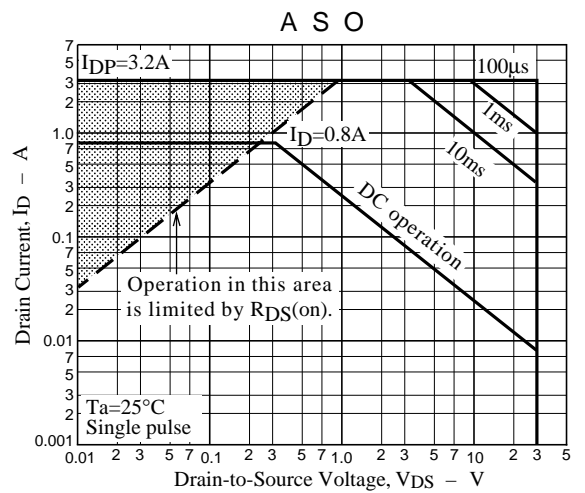
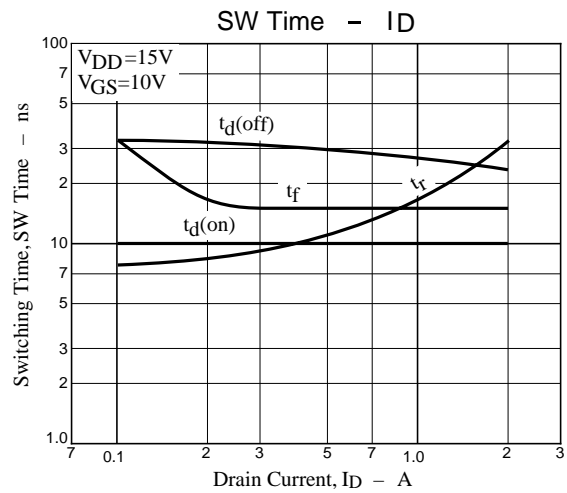
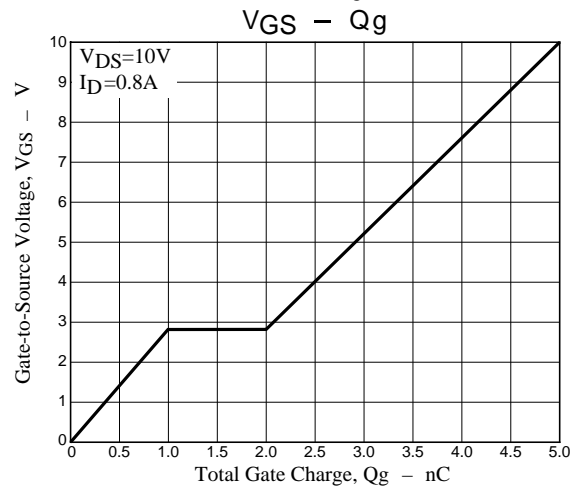
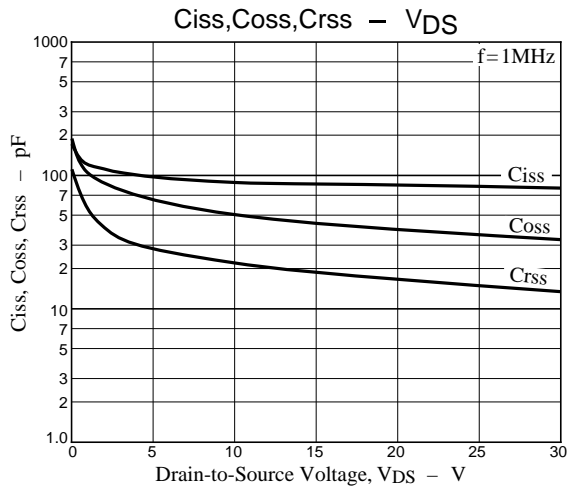
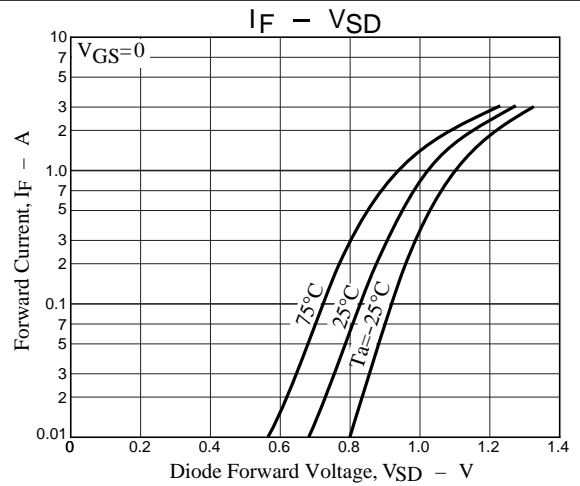
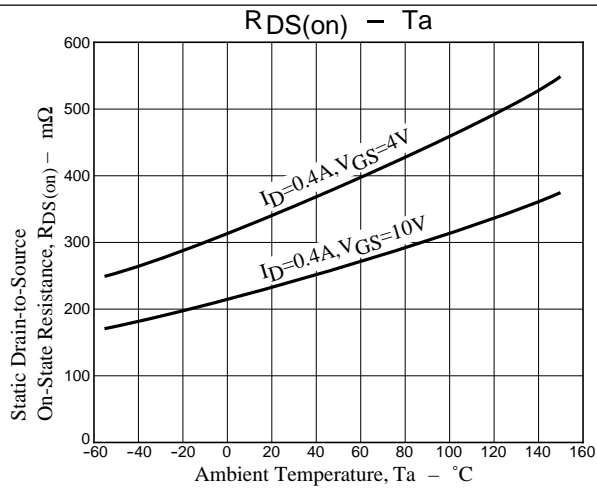
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V _{DS} =10V, f=1MHz		90		pF
Output Capacitance	Coss	V _{DS} =10V, f=1MHz		50		pF
Reverse Transfer Capacitance	Crss	V _{DS} =10V, f=1MHz		22		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		10		ns
Rise Time	t _r	See specified Test Circuit		10		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		30		ns
Fall Time	t _f	See specified Test Circuit		15		ns
Total Gate Charge	Qg	V _{DS} =10V, V _{GS} =10V, I _D =800mA		5		nC
Gate-to-Source Charge	Qgs	V _{DS} =10V, V _{GS} =10V, I _D =800mA		1		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =10V, V _{GS} =10V, I _D =800mA		1		nC
Diode Forward Voltage	V _{SD}	I _S =800mA, V _{GS} =0		1.0	1.2	V

Switching Time Test Circuit



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