



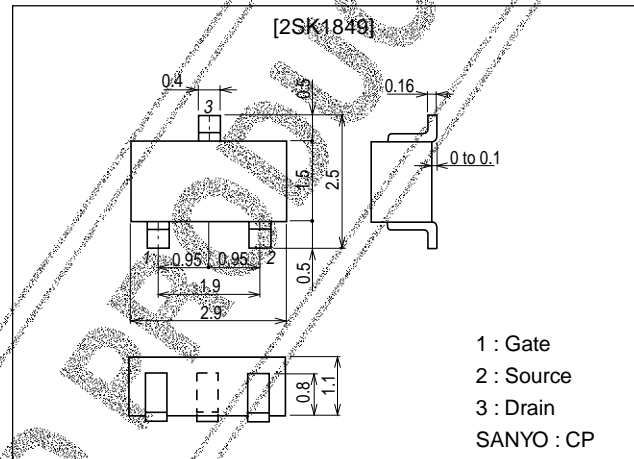
Ultrahigh-Speed Switching Applications

Features

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

Package Dimensions

unit:mm
2091A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DS}		100	V
Gate-to-Source Voltage	V _{GS}		±15	V
Drain Current (DC)	I _D		250	mA
Drain Current (pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	1	A
Allowable Power Dissipation	P _D		250	mW
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-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
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	y _{fs}	V _{DS} =10V, I _D =150mA	250	500		mS
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =150mA, V _{GS} =10V		2.7	3.5	Ω
	R _{DS(on)2}	I _D =150mA, V _{GS} =4V		3.2	4.2	Ω

Marking : Mj

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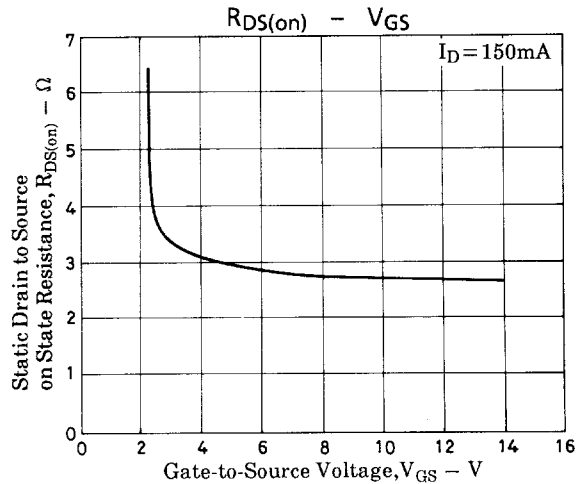
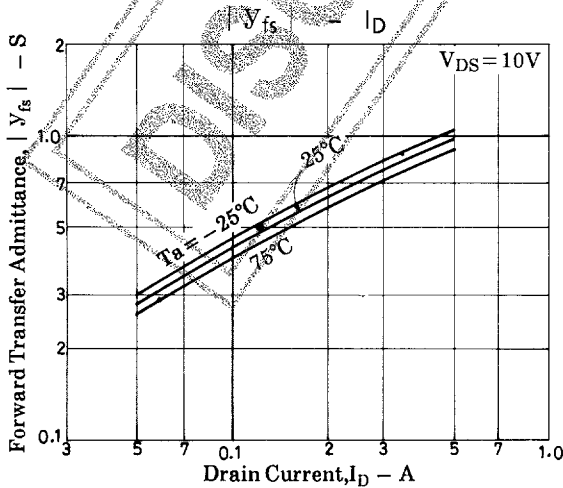
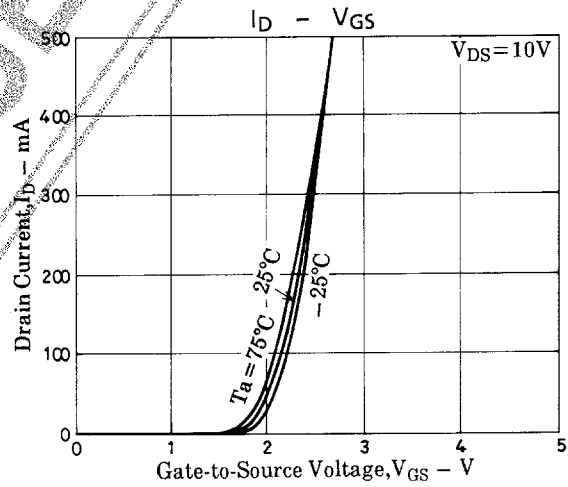
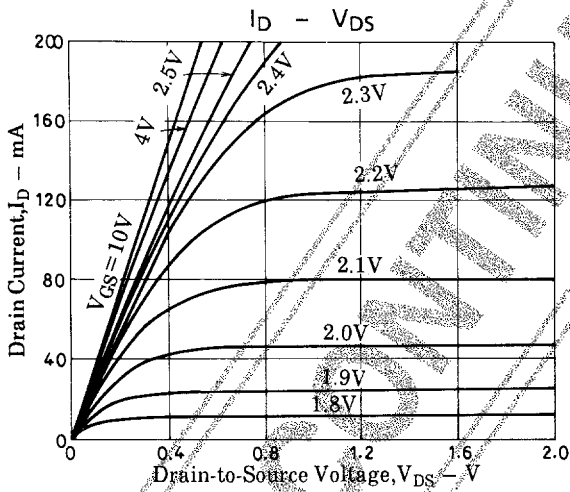
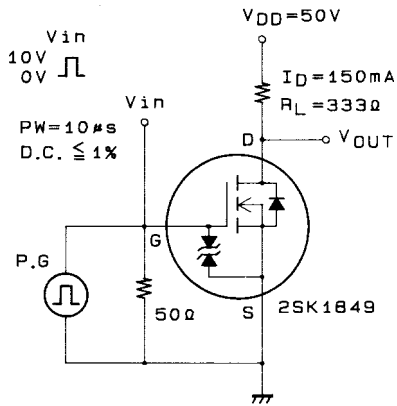
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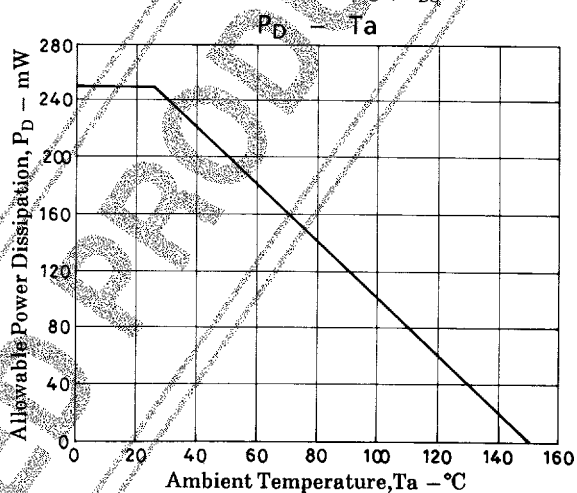
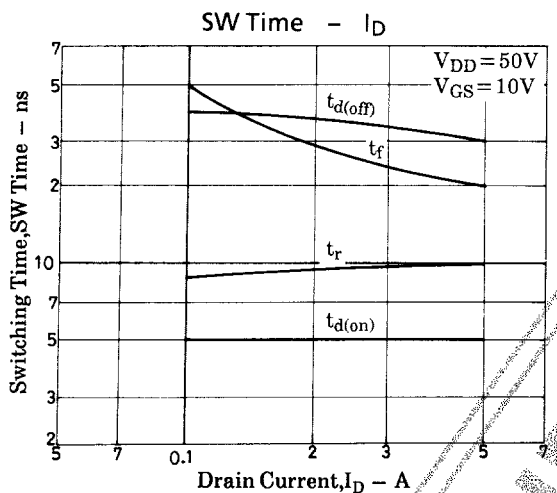
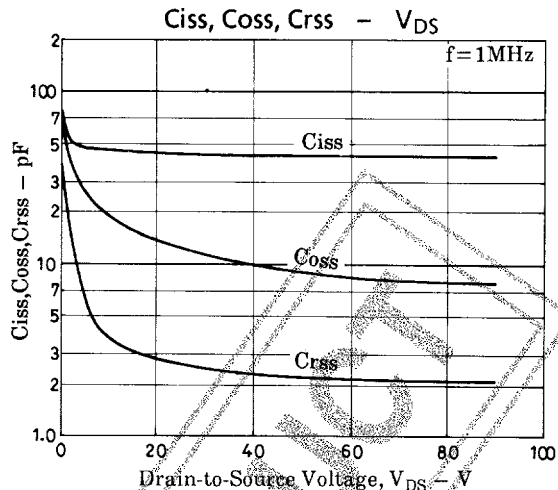
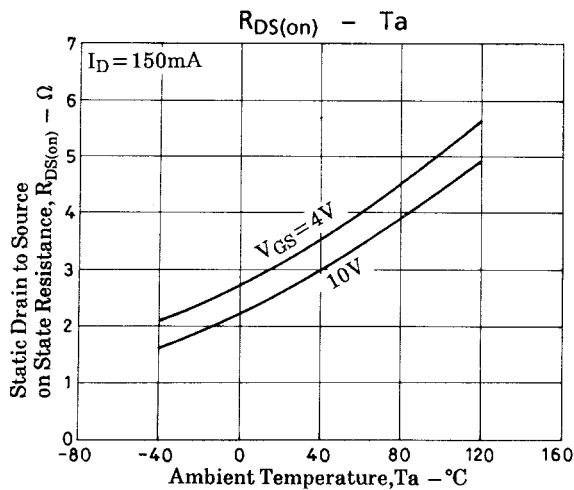
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Parameter	Symbol	Conditions	Ratings	Unit
Input Capacitance	Ciss	$V_{DS}=20V, f=1MHz$	45	pF
Output Capacitance	Coss	$V_{DS}=20V, f=1MHz$	15	pF
Reverse Transfer Capacitance	Crss	$V_{DS}=20V, f=1MHz$	3	pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit	5	ns
Rise Time	t_r	See specified Test Circuit	10	ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit	40	ns
Fall Time	t_f	See specified Test Circuit	35	ns
Diode Forward Voltage	V_{SD}	$I_S=250mA, V_{GS}=0$	0.9	V

Switching Time Test Circuit





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