



Ultrahigh-Speed Switching Applications

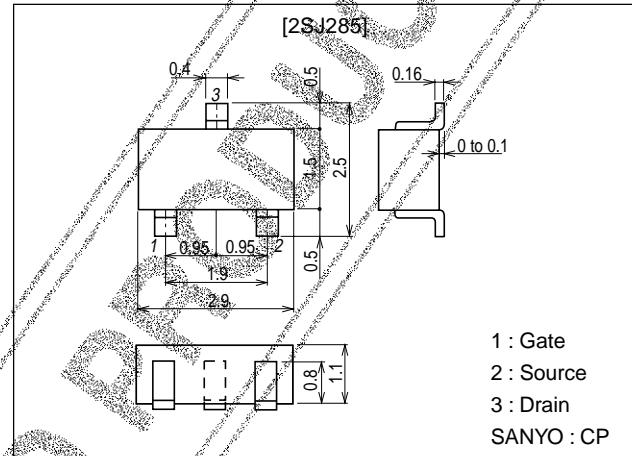
Features

- 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}		-60	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	$V_{(BR)DSS}$	$I_D = -1mA, V_{GS} = 0$	-60			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -60V, V_{GS} = 0$			-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} $	$V_{DS} = -10V, I_D = -150mA$	200	350		mS
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = -150mA, V_{GS} = -10V$		2.2	3.0	Ω
	$R_{DS(on)}$	$I_D = -150mA, V_{GS} = -4V$		3.0	4.0	Ω

Marking : BM

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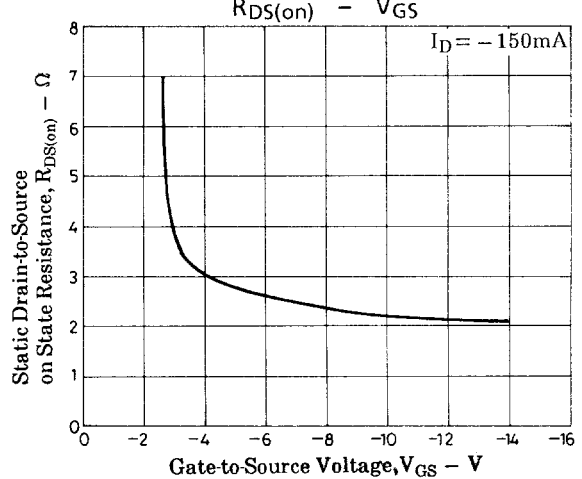
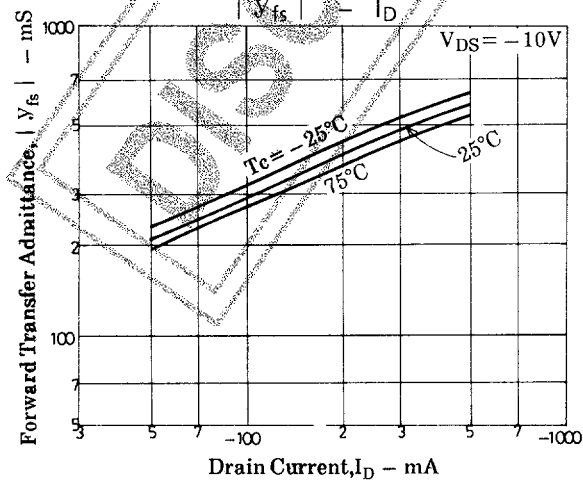
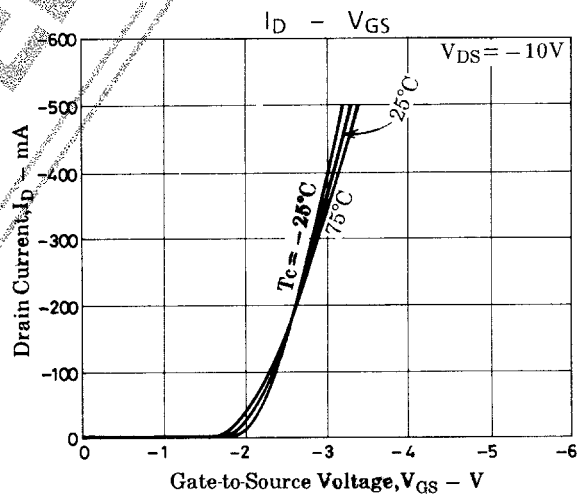
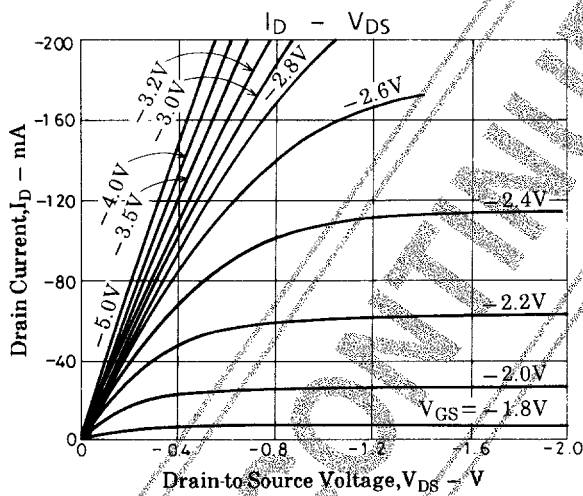
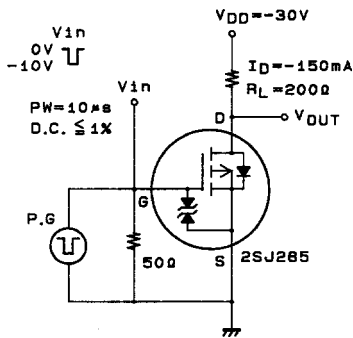
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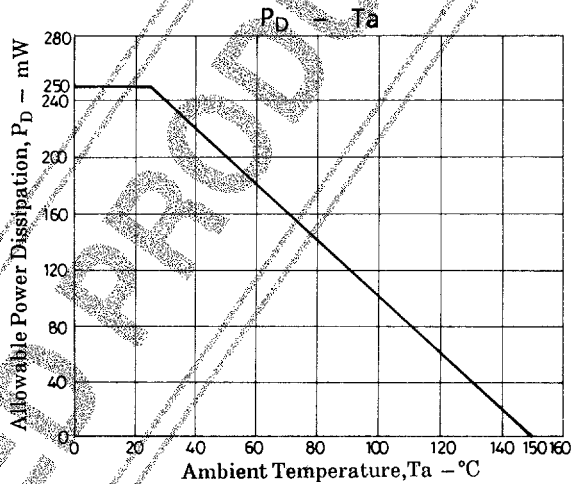
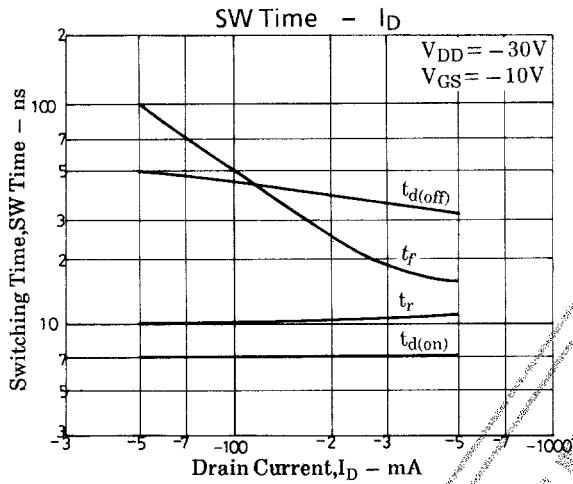
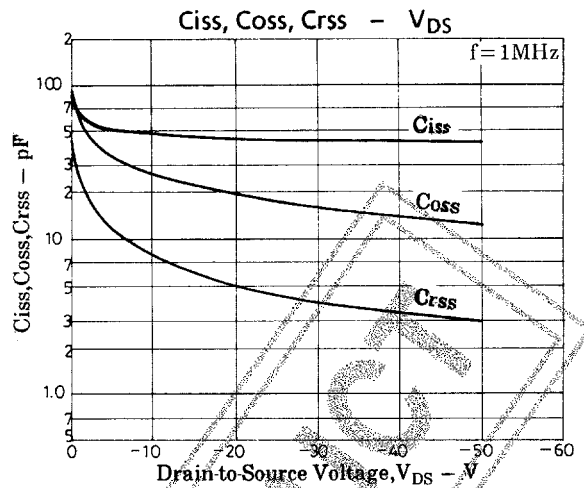
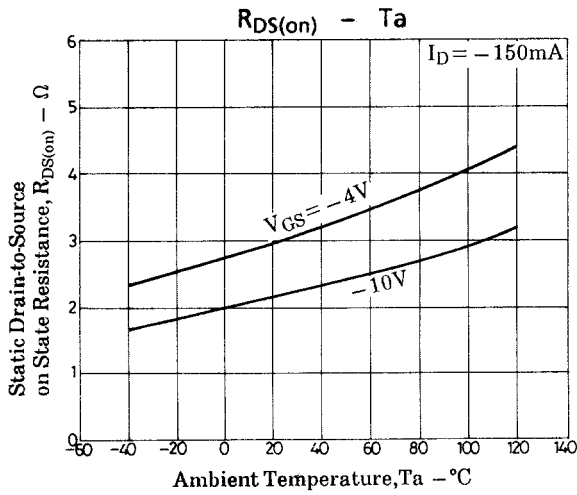
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	C_{iss}	$V_{DS} = -20V, f = 1MHz$		45		pF
Output Capacitance	C_{oss}	$V_{DS} = -20V, f = 1MHz$		20		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -20V, f = 1MHz$		5		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		7		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}	$I_S = -250mA, V_{GS} = 0$		1		V

Switching Time Test Circuit



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