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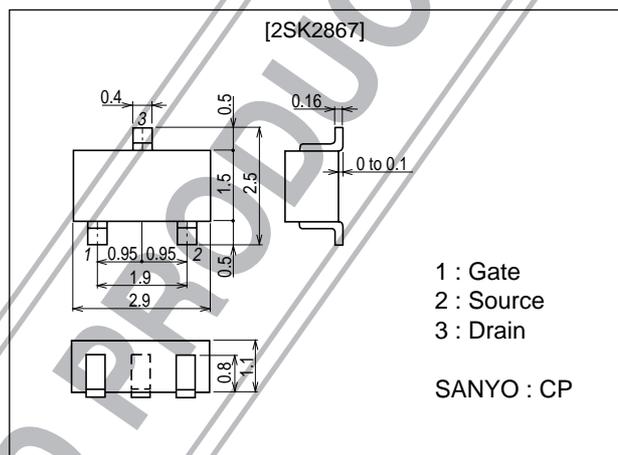
Ultrahigh-Speed Switching Applications

Features

- 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 _{DSS}		450	V
Gate-to-Source Voltage	V _{GSS}		±15	V
Drain Current (DC)	I _D		30	mA
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	120	mA
Allowable Power Dissipation	P _D	Tc=25°C	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 =500μA, V _{GS} =0	450			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =450V, V _{GS} =0			10	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 =15mA	14	28		mS
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =15mA, V _{GS} =10V		190	250	Ω
	R _{DS(on)2}	I _D =15mA, V _{GS} =4V		210	275	Ω

Marking : CK

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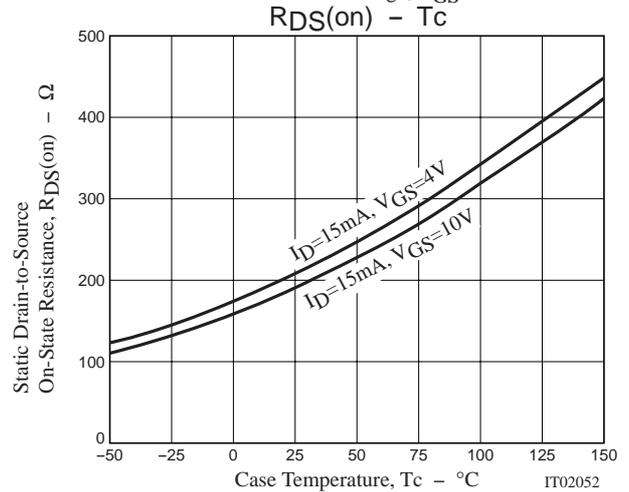
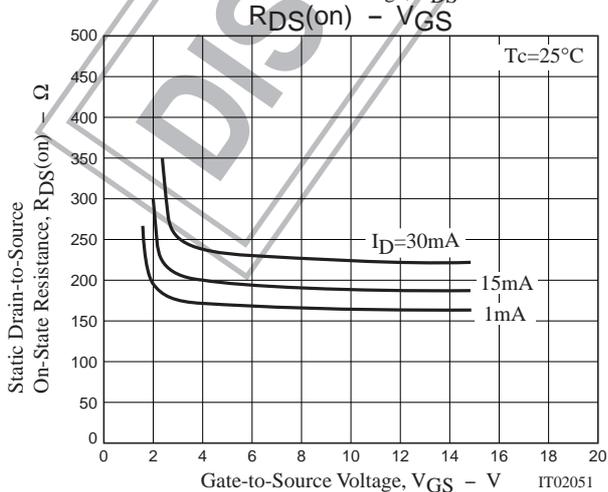
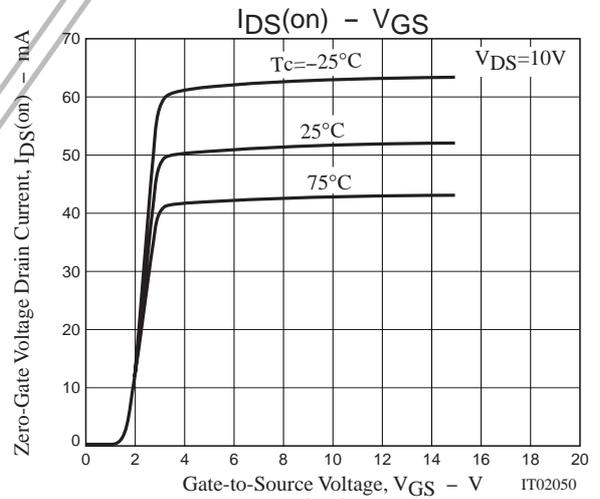
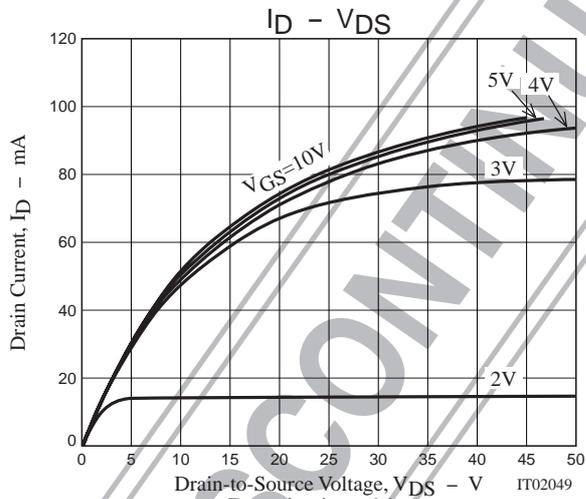
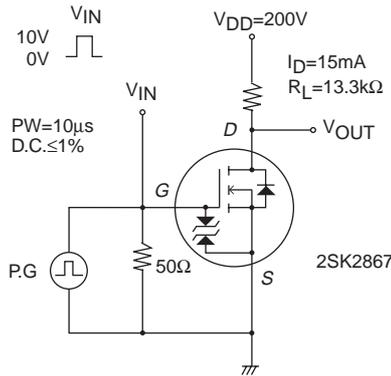
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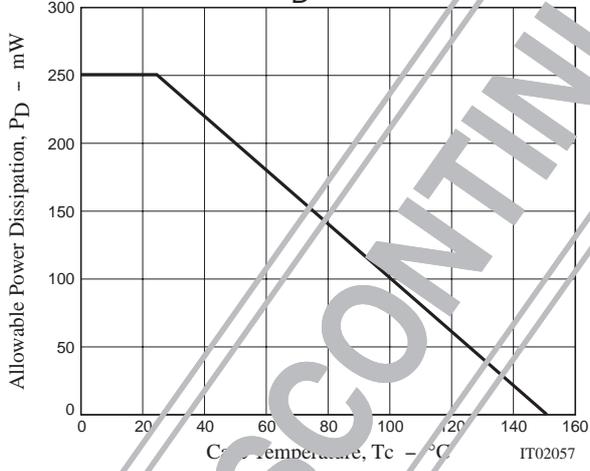
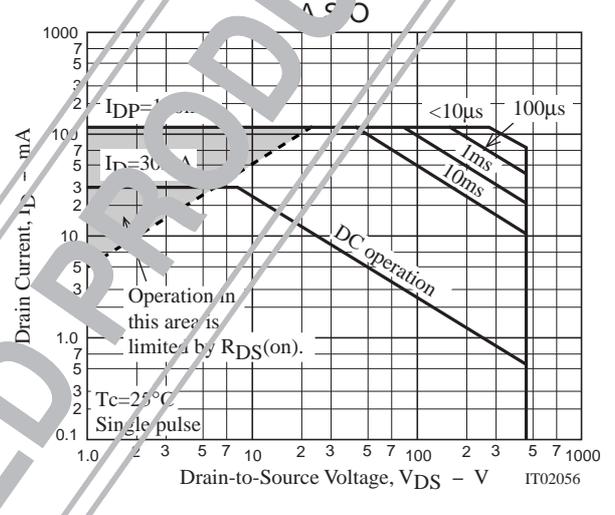
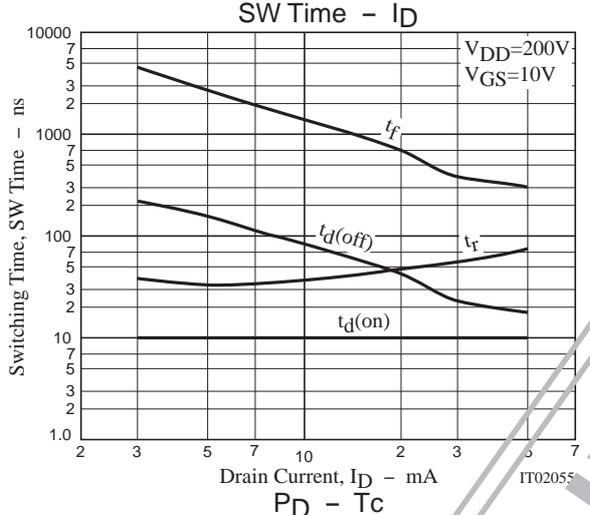
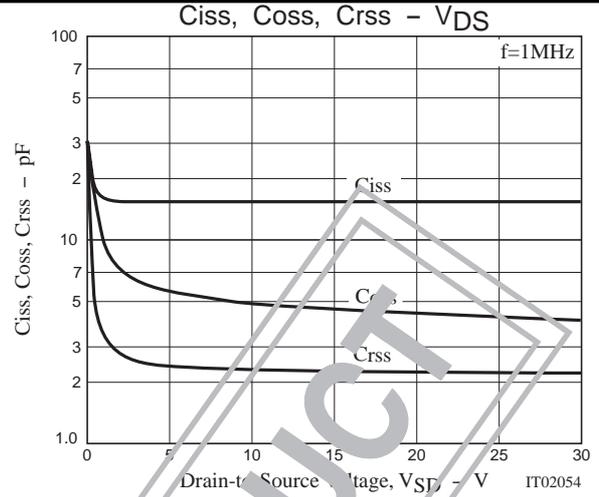
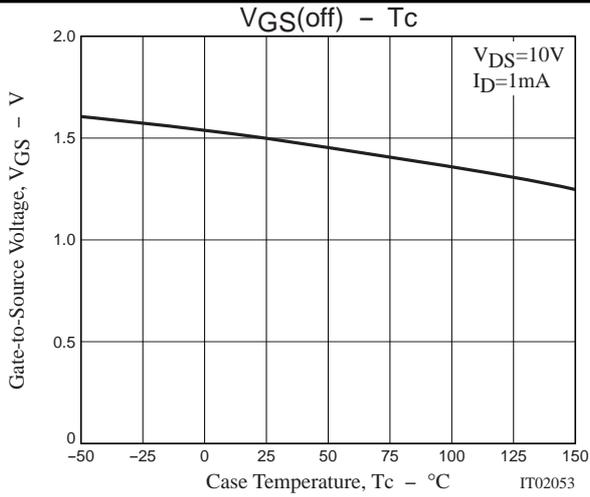
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		20		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		5		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		3		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		10		ns
Rise Time	t _r	See specified Test Circuit		45		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		60		ns
Fall Time	t _f	See specified Test Circuit		1		μs
Diode Forward Voltage	V _{SD}	I _S =30mA, V _{GS} =0		0.79	1.2	V

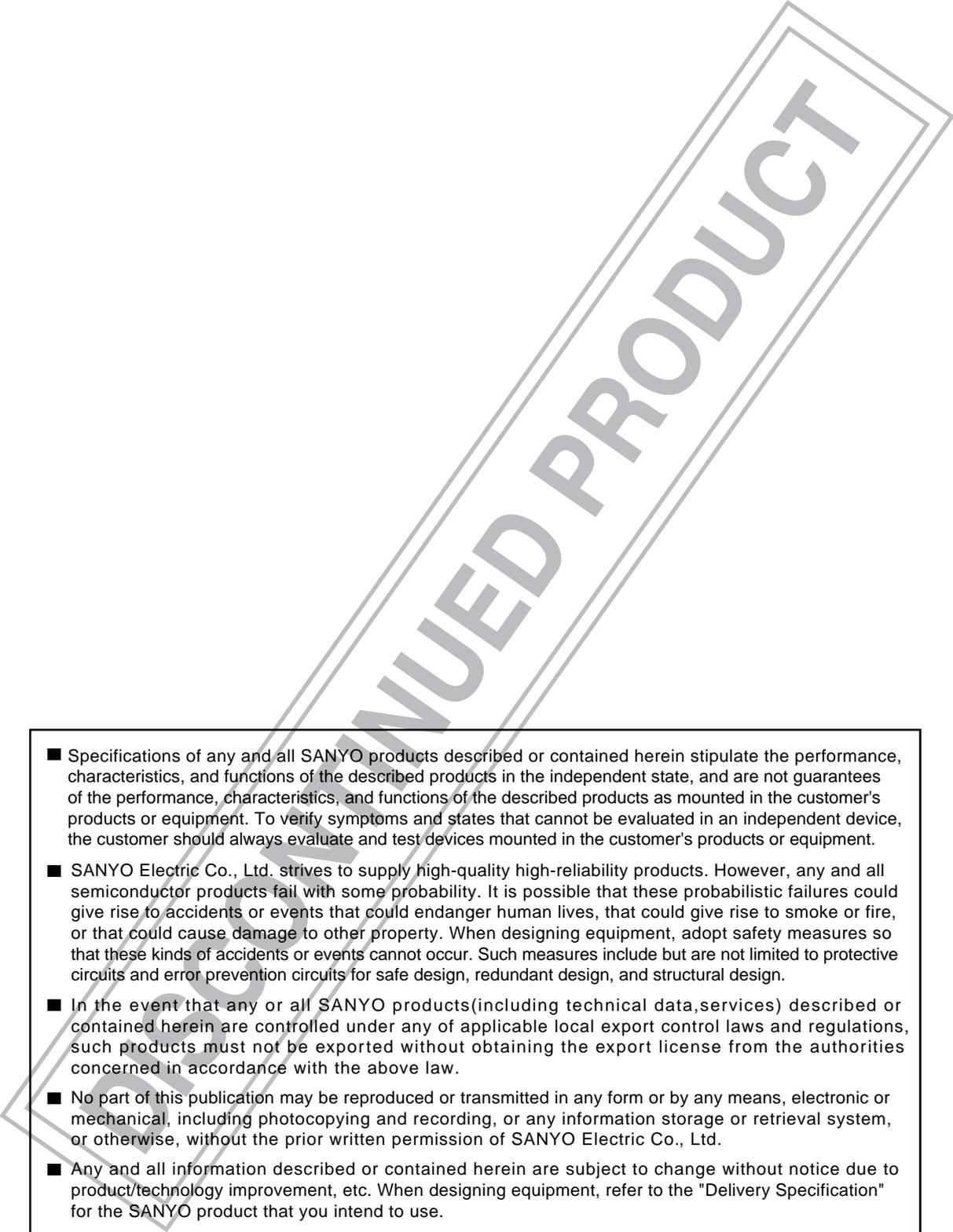
Switching Time Test Circuit



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