



Ultrahigh-Speed Switching Applications

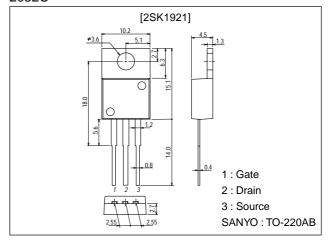
Features

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

Package Dimensions

unit:mm

2052C



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		250	V
Gate-to-Source Voltage	VGSS		±30	V
Drain Current (DC)	ID		4	Α
Drain Current (pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	16	Α
Allowable Power Dissipation	PD		1.75	W
		Tc=25°C	50	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _{GS} =0	250			V
Gate-to-Source Breakdown Voltage	V(BR)GSS	I _G =±100μA, V _{DS} =0	±30			V
Zero-Gate Votlage Drain Current	IDSS	V _{DS} =250V, V _{GS} =0			100	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±25V, V _{DS} =0			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	1.5		2.5	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =2A	2.5	4		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =2A, V _{GS} =10V		0.5	0.7	Ω

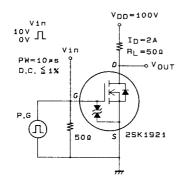
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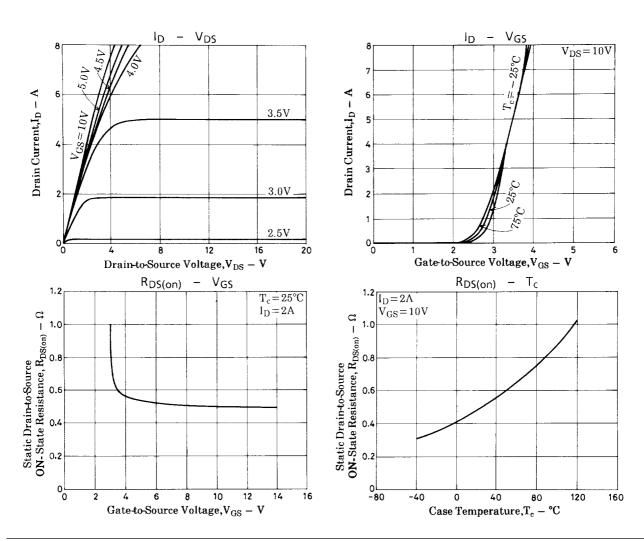
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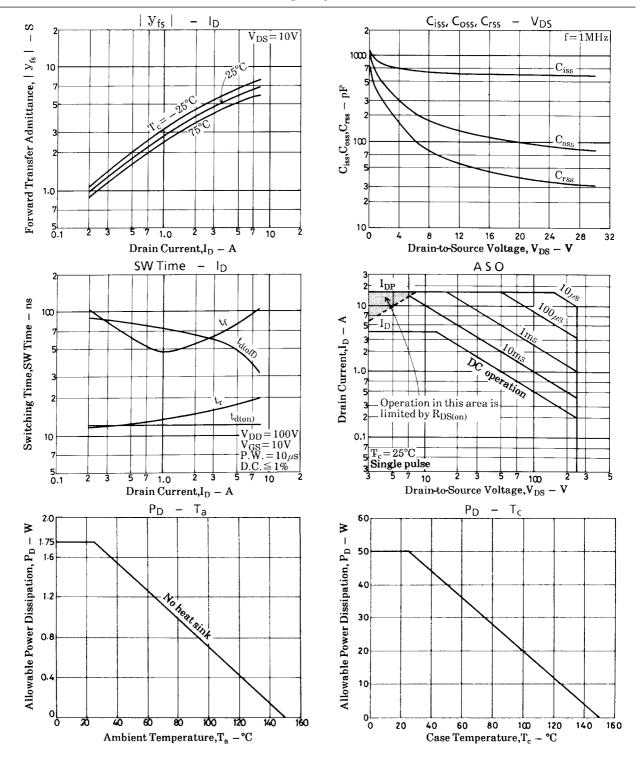
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Parameter	Symbol	Conditions	Ratings			Unit
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		600		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		100		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		40		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		12		ns
Rise Time	t _r	See specified Test Circuit.		15		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		65		ns
Fall Time	t _f	See specified Test Circuit.		55		ns
Diode Forward Voltage	V_{SD}	I _S =4A, V _{GS} =0		1.0	1.5	V

Switching Time Test Circuit







2SK1921

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