



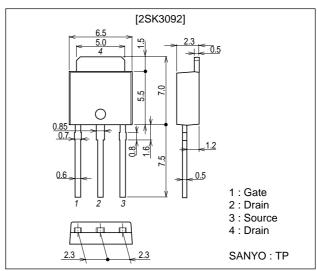
Ultrahigh-Speed Switching Applications

Features

- · Low ON-resistance.
- · Low Qg.

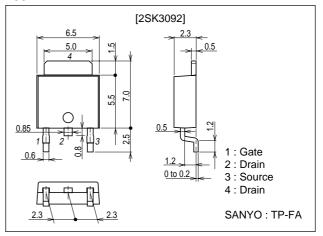
Package Dimensions

unit : mm 2083B



Package Dimensions

unit : mm 2092B



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Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		400	V
Gate-to-Source Voltage	VGSS		±30	V
Drain Current (DC)	ID		3	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	12	Α
Allowable Power Dissipation	D-		1.0	W
	PD	Tc=25°C	30	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	400			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =320V, V _{GS} =0			1.0	mA
Gate-to-Sourse Leakage Current	IGSS	V _{GS} =±30V, V _{DS} =0			±100	nA
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	3.0		4.0	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =1.5A	0.7	1.4		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)	I _D =1.5A, V _{GS} =15V		1.8	2.3	Ω
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		360		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		90		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		45		pF
Total Gate Charge	Qg	V _{DS} =200V, V _{GS} =10V, I _D =3A		10		nC
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		28		ns
Fall Time	t _f	See specified Test Circuit		17		ns
Diode Forward Voltage	V _{SD}	I _S =3A, V _G S=0		0.85	1.2	V

Marking: K3092

Switching Time Test Circuit

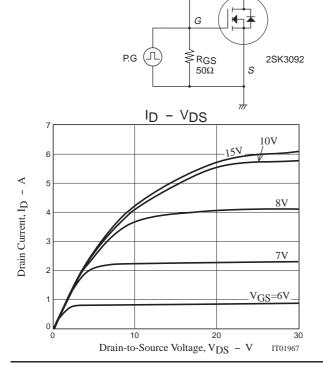
PW=1μs D.C.≤0.5%

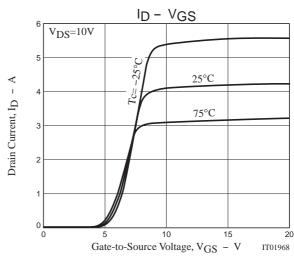
VGS=15V

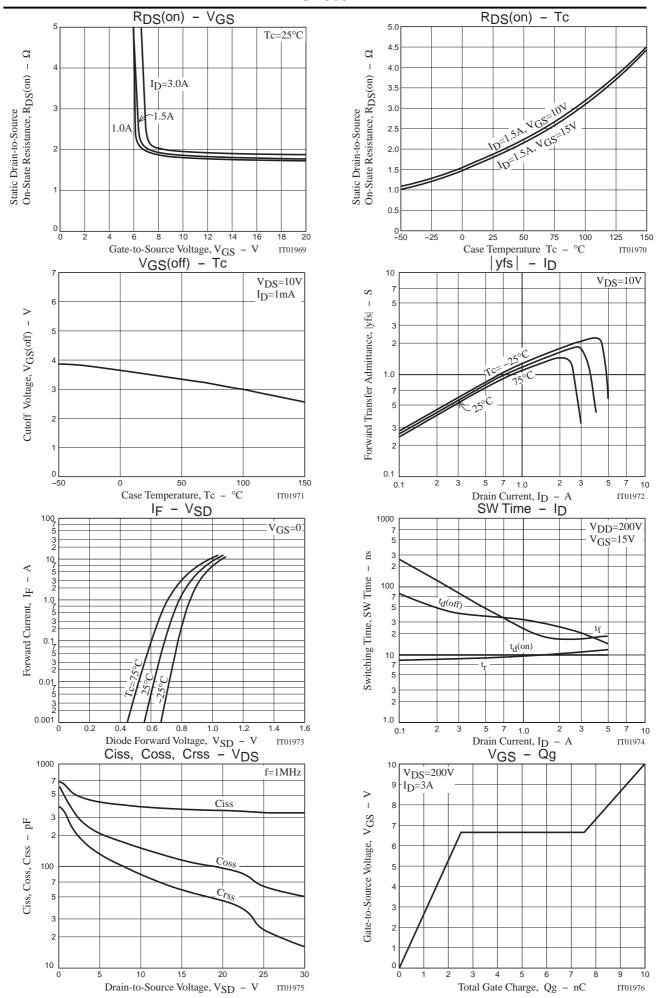
V_{DD}=200V

 $I_D=1.5A$ $R_L=133\Omega$

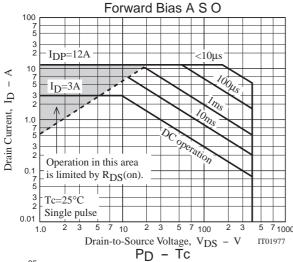
⊸ Vout

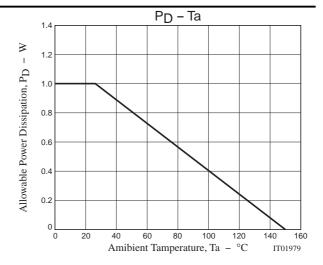


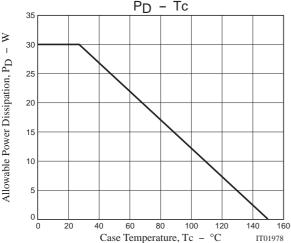




2SK3092







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