



Ultrahigh-Speed Switching Applications

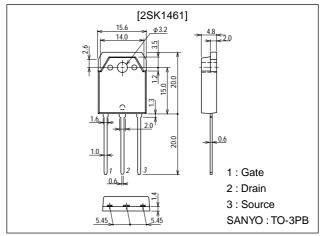
Features

- · Low ON-state resistance.
- · Ultrahigh-speed switching.
- · Converters.

Package Dimensions

unit:mm

2056A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		900	V
Gate-to-Source Voltage	V _{GSS}		±30	V
Drain Current (DC)	ID		5	Α
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	10	А
Allowable Power Dissipation	D_	Tc=25°C	120	W
	P _D		2.5	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	01111
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _{GS} =0	900			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =900V, V _{GS} =0			1.0	mA
Gate-to-Source Leakage Current	IGSS	V _{GS} =±30V, V _{DS} =0			±100	nA
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	2.0		3.0	V
Forward Transfer Admittance	yfs	V _{DS} =20V, I _D =2A	1.0	2.0		S
Static Drain-to-Source ON-State Resistance	R _{DS(on)}	I _D =2A, V _{GS} =10V		2.8	3.6	Ω

(Note) Be careful in handling the 2SK1461 because it has no protection diode between gate and source.

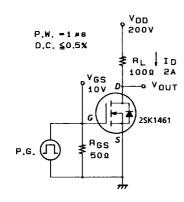
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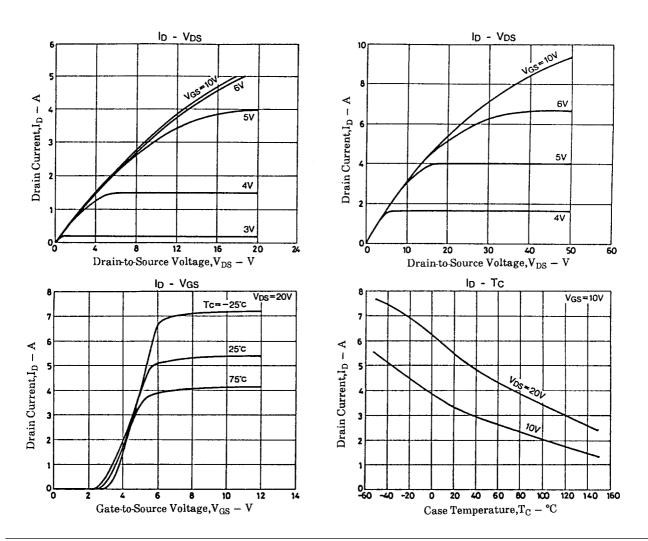
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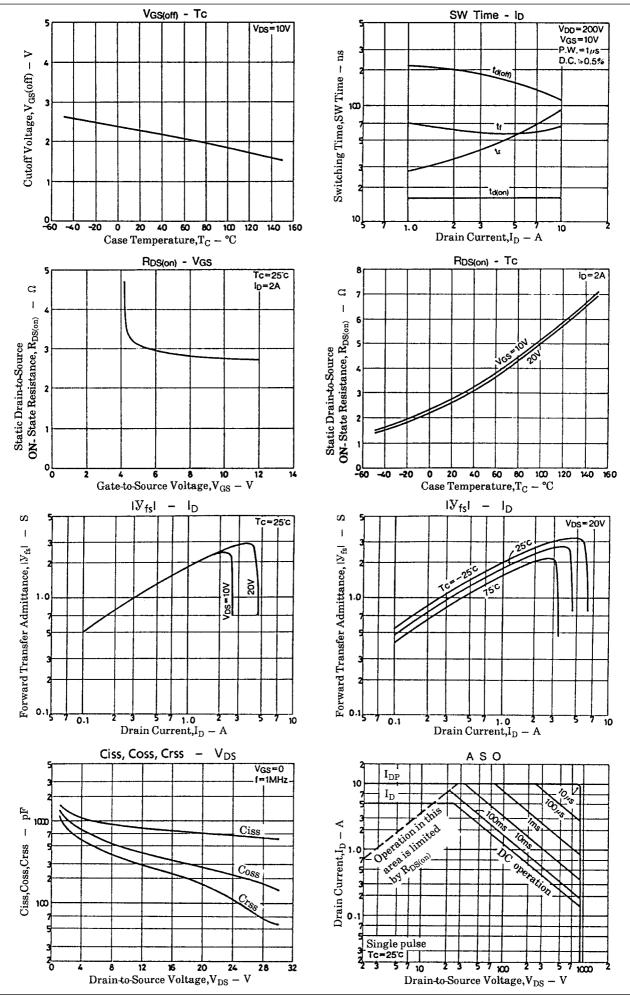
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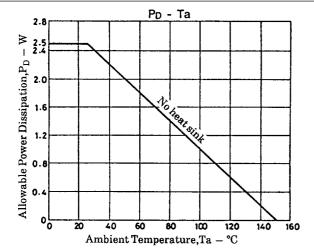
Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	Offic
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		700		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		300		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		170		pF
Turn-ON Delay Time	t _{d(on)}	I_D =2A, V_{GS} =10V, V_{DD} =200V, R_{GS} =50 Ω		15		ns
Rise Time	t _r	I_{D} =2A, V_{GS} =10V, V_{DD} =200V, R_{GS} =50 Ω		35		ns
Turn-OFF Delay Time	td(off)	I_D =2A, V_{GS} =10V, V_{DD} =200V, R_{GS} =50 Ω		200		ns
Fall Time	t _f	I_D =2A, V_{GS} =10V, V_{DD} =200V, R_{GS} =50 Ω		65		ns
Diode Forward Voltage	V _{SD}	I _S =5A, V _{GS} =0			1.8	V

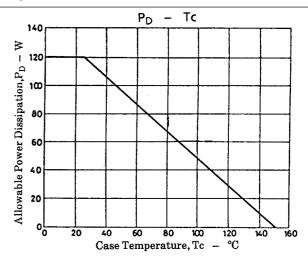
Switching Time Test Circuit











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