



# **Ultrahigh-Speed Switching Applications**

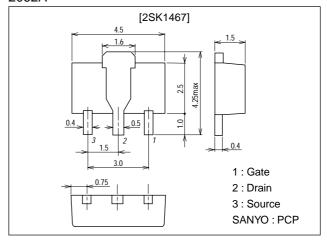
### **Features**

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

# **Package Dimensions**

unit:mm

2062A



# **Specifications**

## Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		30	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±15	V
Drain Current (DC)	ID		2	Α
Drain Current (pulse)	I <sub>DP</sub>		8	Α
Allowable Power Dissipation	D-	Tc=25°C	3.5	W
	PD	Mounted on a ceramic board (250mm <sup>2</sup> ×0.8mm)	1.5	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	Offic
Drain-to-Source Breakdown Voltage	V(BR)DSS	I <sub>D</sub> =1mA, V <sub>GS</sub> =0	30			V
Zero-Gate Votlage Drain Current	IDSS	V <sub>DS</sub> =30V, V <sub>GS</sub> =0			100	μA
Gate-to-Source Leakage Current	IGSS	$V_{GS}=\pm 12V$ , $V_{DS}=0$			±10	μA
Cutoff Voltage	VGS(off)	$V_{DS}$ =10V, $I_D$ =1mA	1.0		2.0	V
Forward Transfer Admittance	yfs	V <sub>DS</sub> =10V, I <sub>D</sub> =1A	1.2	2.0		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)</sub> 1	I <sub>D</sub> =1A, V <sub>GS</sub> =10V		0.2	0.3	Ω
	R <sub>DS(on)</sub> 2	I <sub>D</sub> =1A, V <sub>GS</sub> =4V		0.3	0.45	Ω

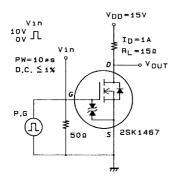
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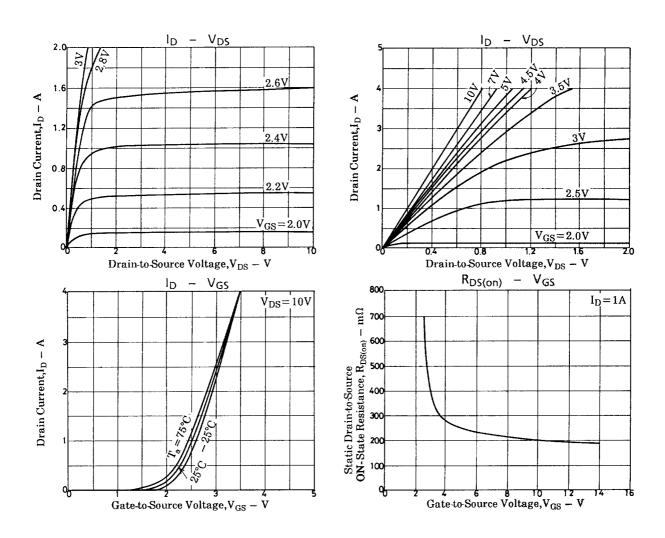
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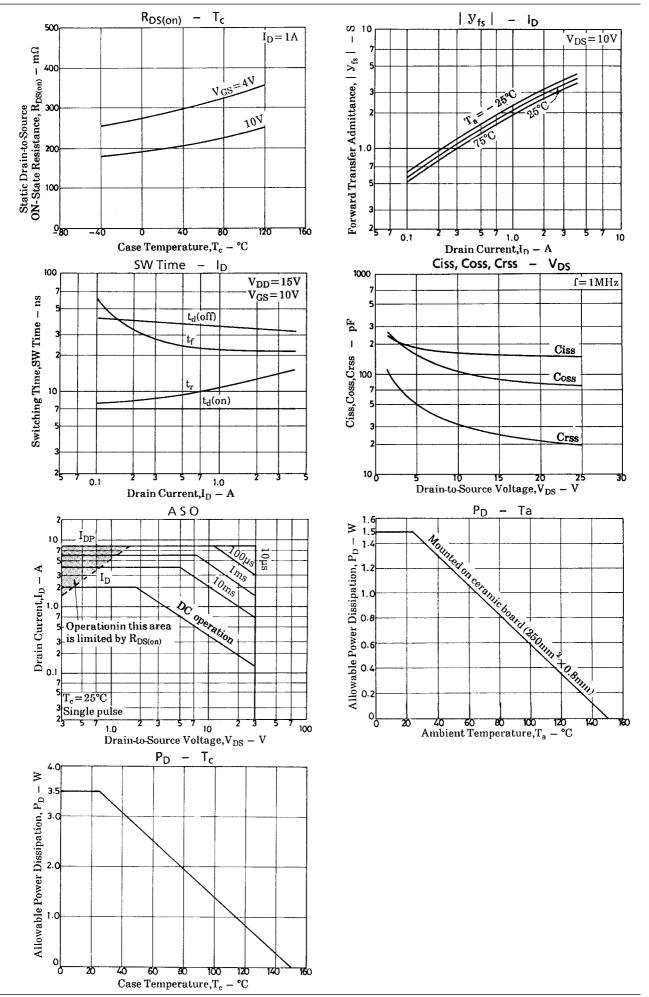
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Parameter	Symbol	Conditions	Ratings	Unit
Input Capacitance	Ciss	V <sub>DS</sub> =10V, f=1MHz	170	pF
Output Capacitance	Coss	V <sub>DS</sub> =10V, f=1MHz	100	pF
Reverse Transfer Capacitance	Crss	V <sub>DS</sub> =10V, f=1MHz	30	pF
Turn-ON Delay Time	t <sub>d</sub> (on)	See specified Test Circuit	7	ns
Rise Time	t <sub>r</sub>	See specified Test Circuit	11	ns
Turn-OFF Delay Time	t <sub>d</sub> (off)	See specified Test Circuit	35	ns
Fall Time	t <sub>f</sub>	See specified Test Circuit	25	ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =2A, V <sub>GS</sub> =0	1.0	V

## **Switching Time Test Circuit**







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