



# 2SK1469

## Ultrahigh-Speed Switching Applications

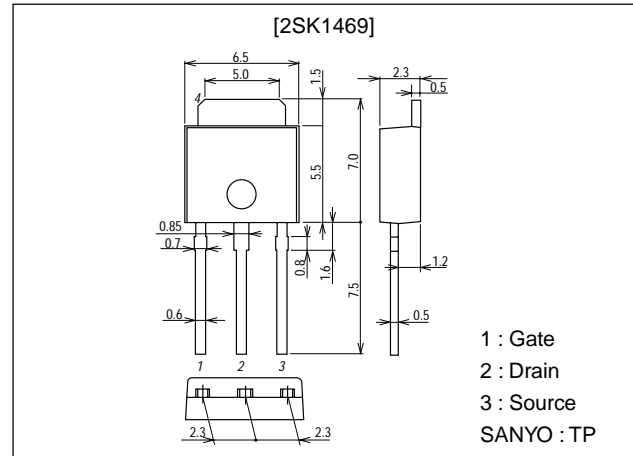
### Features

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

### Package Dimensions

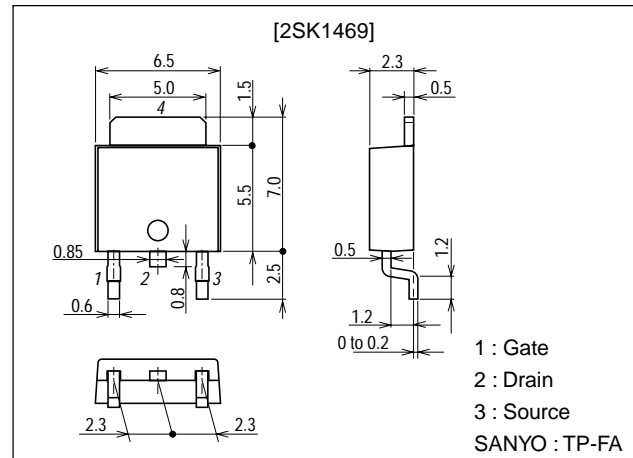
unit:mm

2083B



unit:mm

2092B



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## Specifications

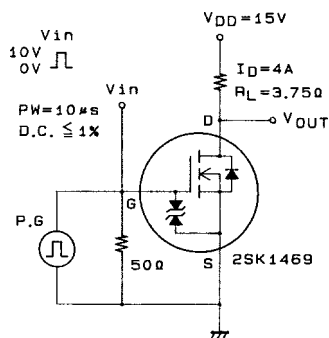
### Absolute Maximum Ratings at Ta = 25°C

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)	I <sub>D</sub>		8	A
Drain Current (pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	32	A
Allowable Power Dissipation	P <sub>D</sub>		1.0	W
		T <sub>c</sub> =25°C	30	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

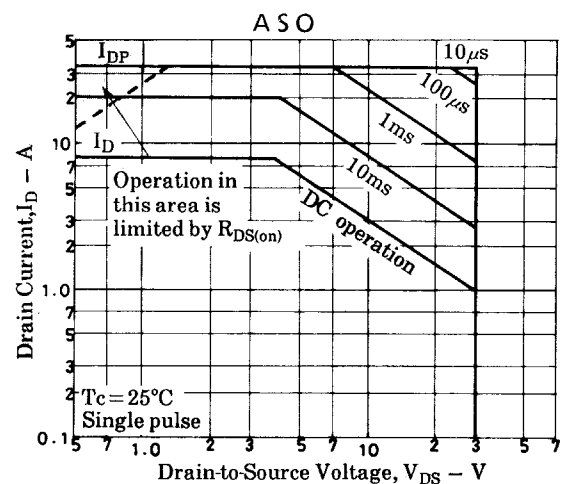
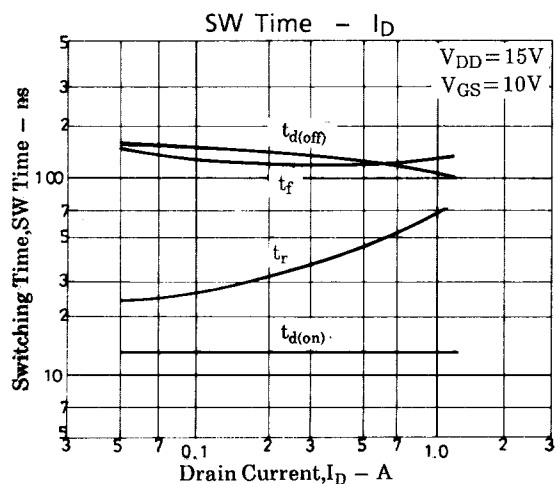
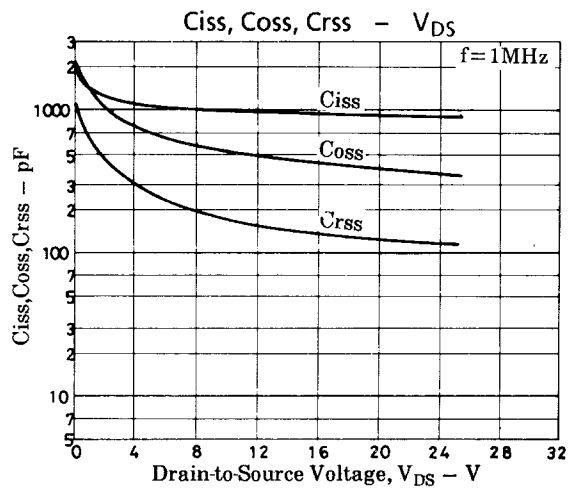
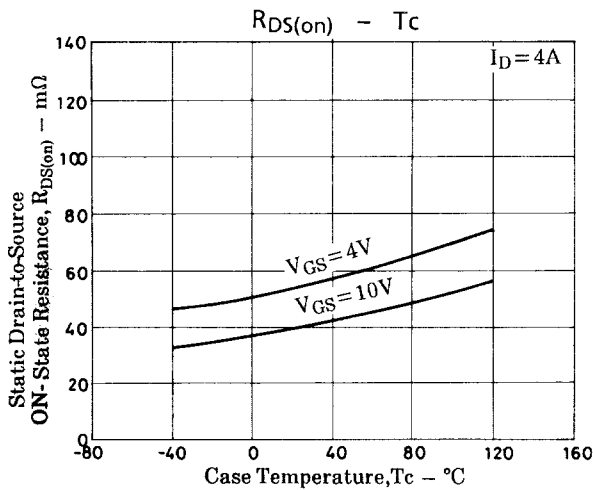
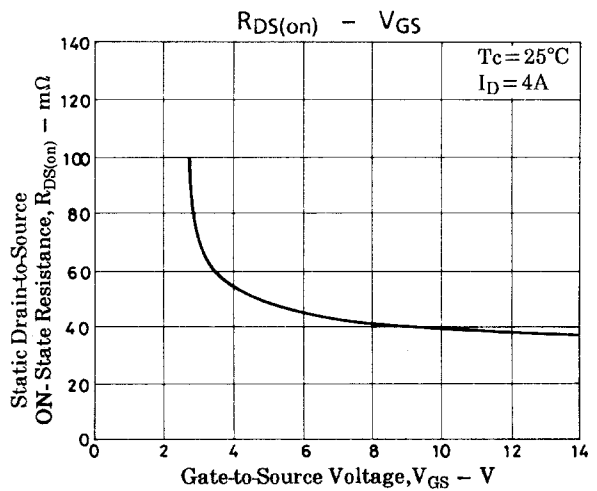
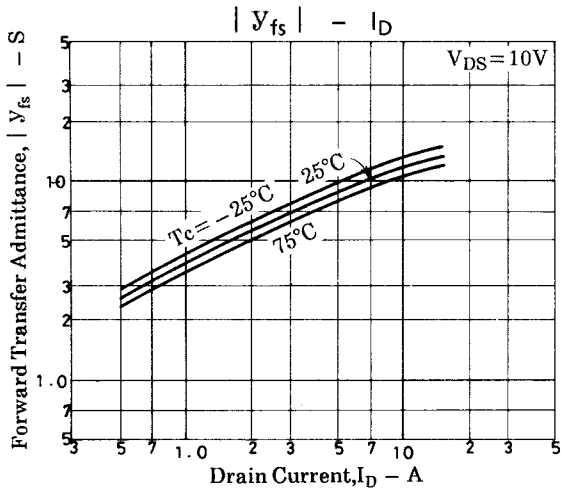
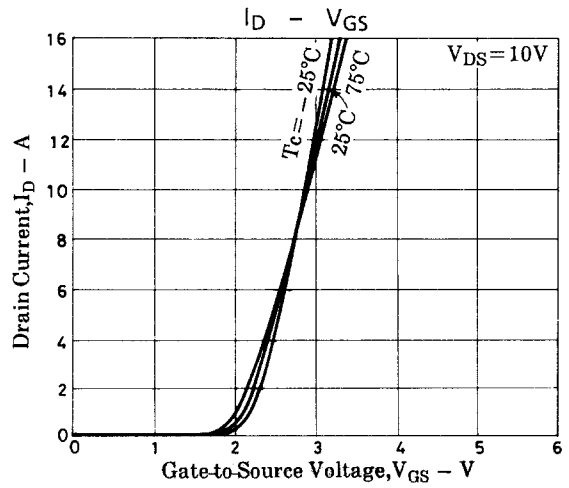
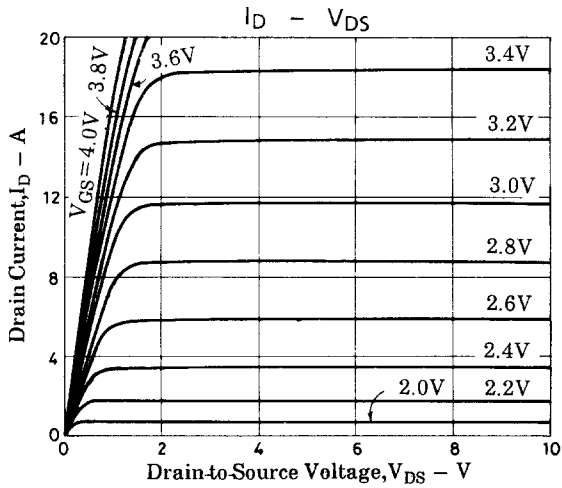
### Electrical Characteristics at Ta = 25°C

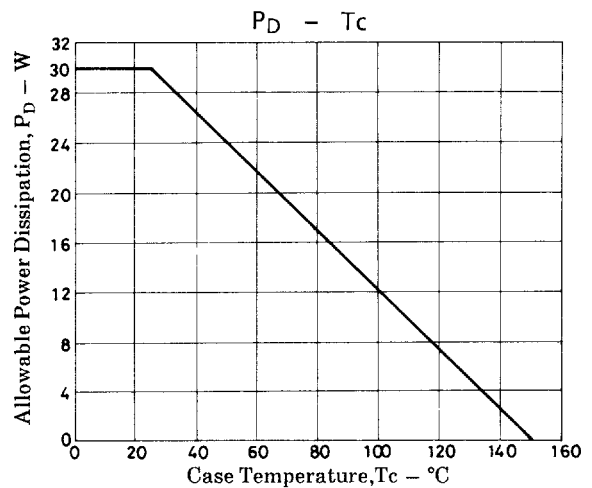
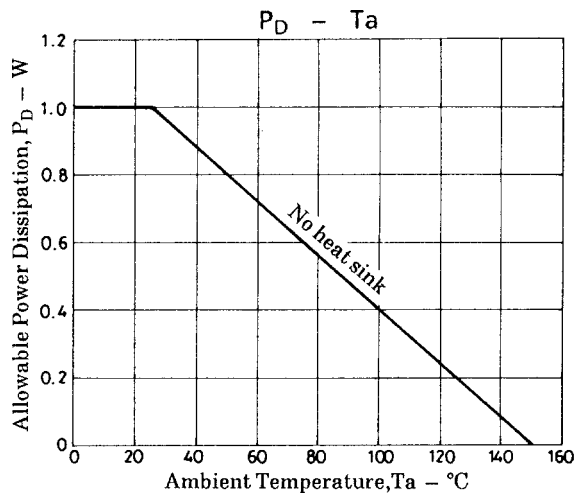
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> =1mA, V <sub>GS</sub> =0	30			V
Gate-to-Source Breakdown Voltage	V <sub>(BR)GSS</sub>	I <sub>G</sub> =±100μA, V <sub>DS</sub> =0	±15			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =30V, V <sub>GS</sub> =0			100	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±12V, V <sub>DS</sub> =0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	1.0		2.0	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =4A	5	8		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> =4A, V <sub>GS</sub> =10V		40	55	mΩ
	R <sub>DS(on)2</sub>	I <sub>D</sub> =4A, V <sub>GS</sub> =4V		55	75	mΩ
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, f=1MHz		1000		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> =10V, f=1MHz		550		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> =10V, f=1MHz		180		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit		13		ns
Rise Time	t <sub>r</sub>	See specified Test Circuit		40		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	See specified Test Circuit		130		ns
Fall Time	t <sub>f</sub>	See specified Test Circuit		120		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =8A, V <sub>GS</sub> =0		1.0	1.5	V

### Switching Time Test Circuit



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