



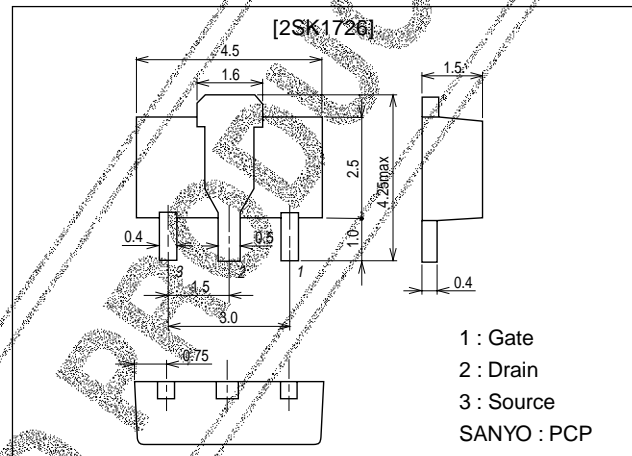
## Ultrahigh-Speed Switching Applications

### 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	$V_{DS}$		60	V
Gate-to-Source Voltage	$V_{GS}$		±15	V
Drain Current (DC)	$I_D$		1	A
Drain Current (Pulse)	$I_{DP}$	PW≤10μs, duty cycle≤1%	4	A
Allowable Power Dissipation	$P_D$	Tc=25°C Mounted on a ceramic board (250mm <sup>2</sup> ×0.8mm)	3.5 1.3	W 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	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0$	60			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0$			10	μA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=±12V, V_{DS}=0$			±10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.0		2.0	V
Forward Transfer Admittance	y <sub>fs</sub>	$V_{DS}=10V, I_D=500mA$	0.6	1.0		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D=500mA, V_{GS}=10V$		0.9	1.2	Ω
	$R_{DS(on)}$	$I_D=500mA, V_{GS}=4V$		1.2	1.6	Ω

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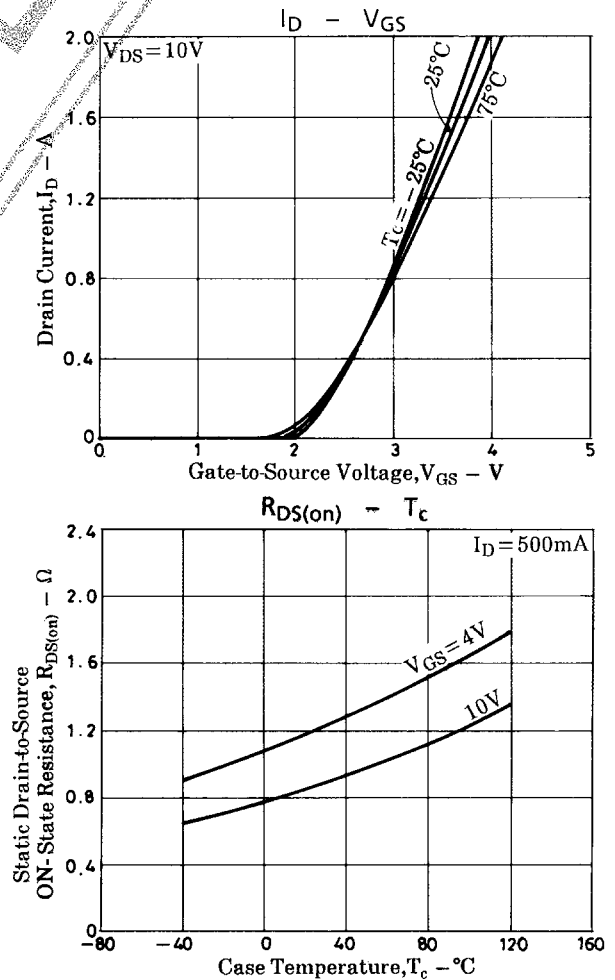
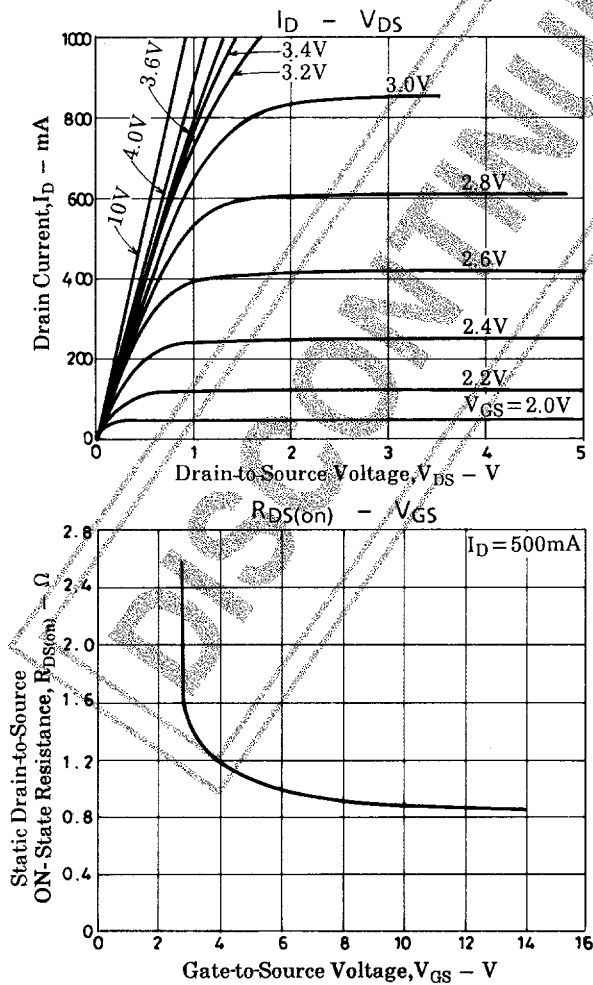
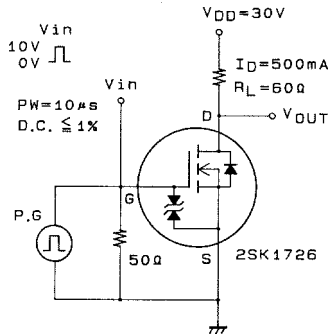
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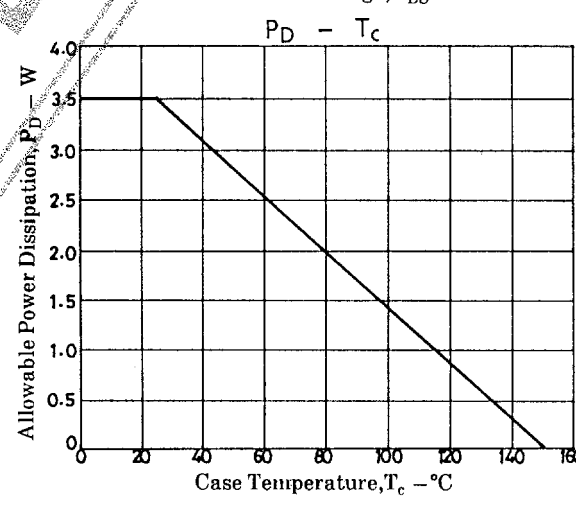
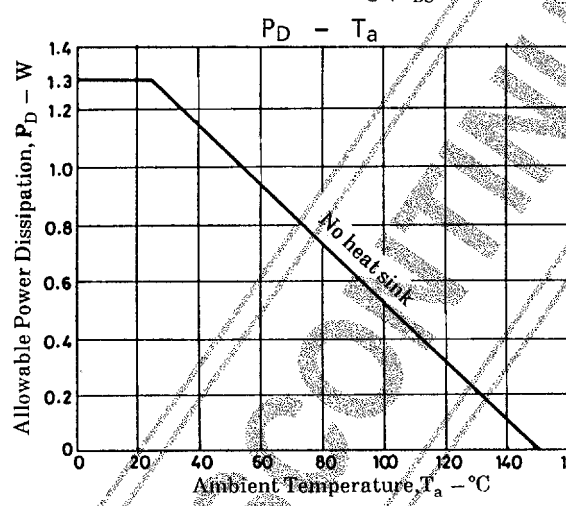
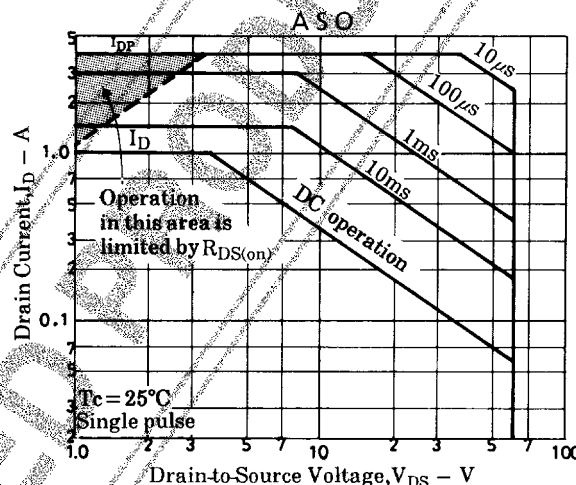
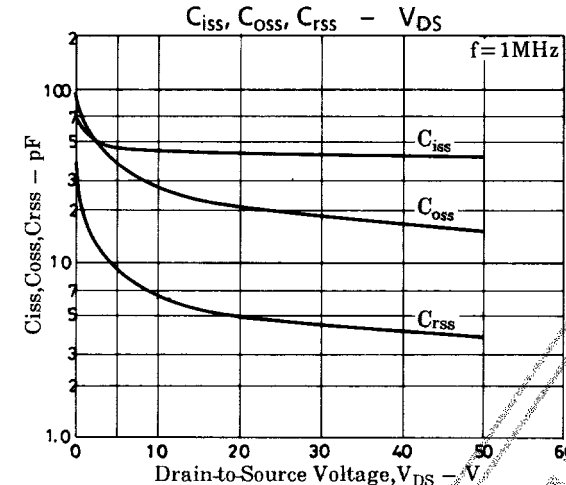
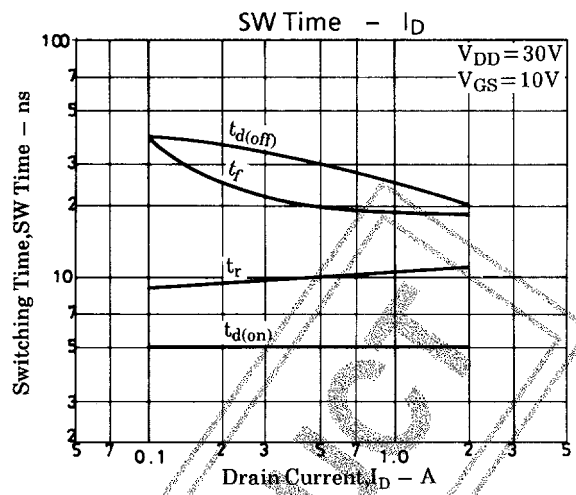
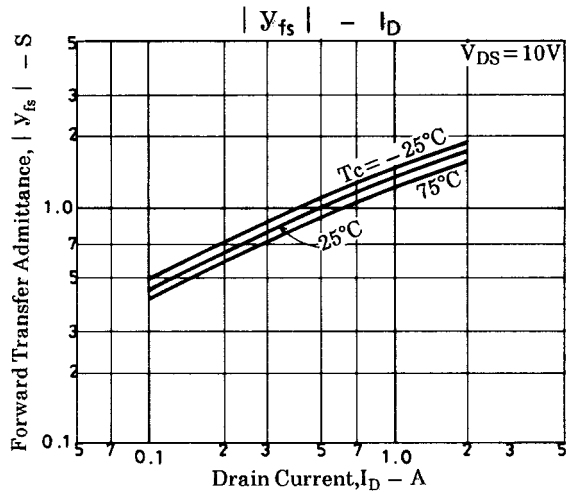
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Parameter	Symbol	Conditions	Ratings	Unit
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$	45	pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$	22	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$	5	pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit	5	ns
Rise Time	$t_r$	See specified Test Circuit	10	ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit	30	ns
Fall Time	$t_f$	See specified Test Circuit	20	ns
Diode Forward Voltage	$V_{SD}$	$I_S=1A, V_{GS}=0$	1.0	V

## Switching Time Test Circuit



# 2SK1726



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