



2SK2152

Ultrahigh-Speed Switching Applications

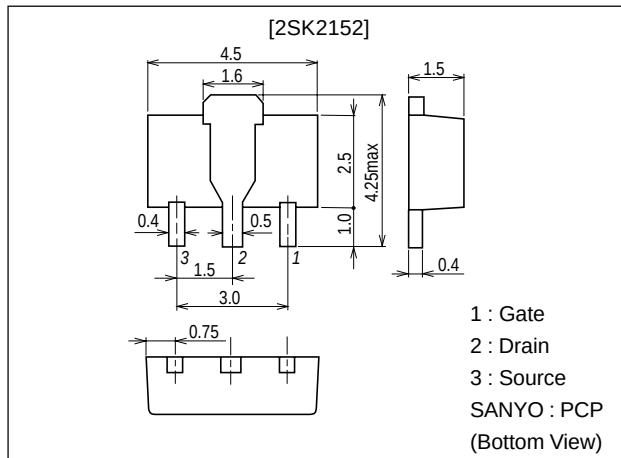
Features

- 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 _{DSS}		20	V
Gate-to-Source Voltage	V _{GSS}		±15	V
Drain Current (DC)	I _D		2	A
Drain Current (pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	8	A
Allowable Power Dissipation	P _D	Tc=25°C	3.5	W
		Mounted on a ceramic board (250mm²×0.8mm)	1.5	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		–55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0$	20			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=\pm 100\mu A, V_{DS}=0$	± 15			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V, V_{GS}=0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.0		2.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=1A$	1.2	2		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=1A, V_{GS}=10V$		130	180	$m\Omega$
	$R_{DS(on)2}$	$I_D=1A, V_{GS}=4V$		170	250	$m\Omega$

Marking : KJ

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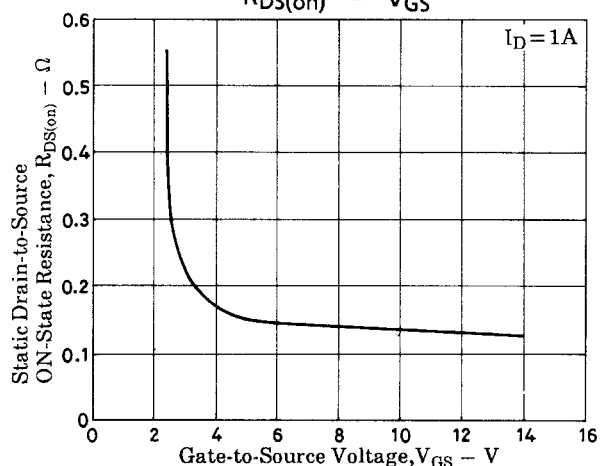
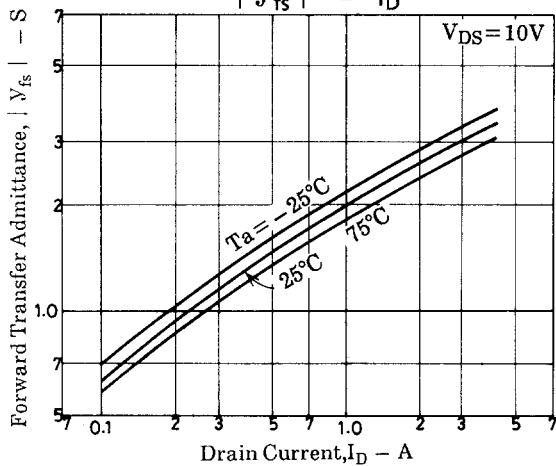
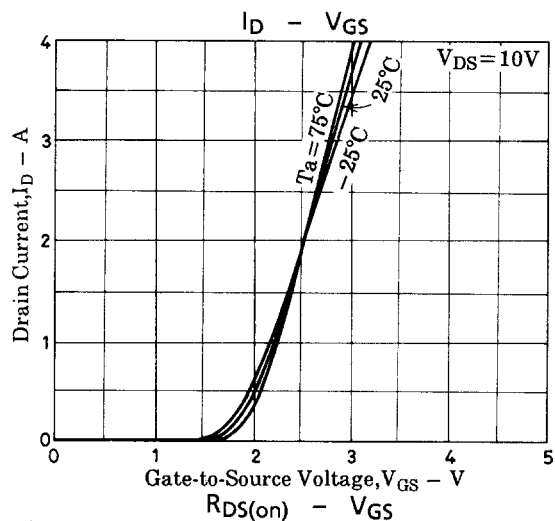
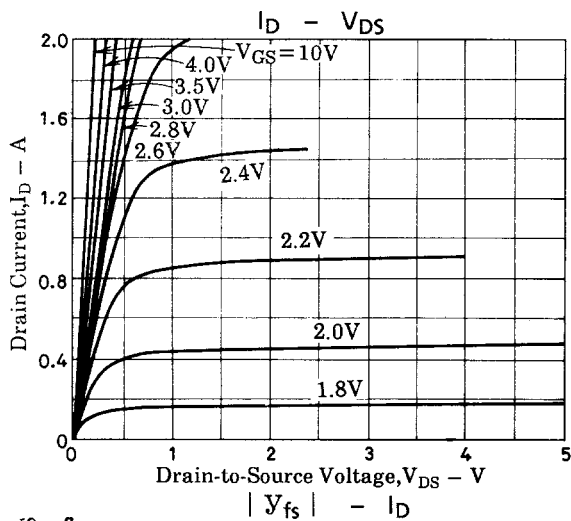
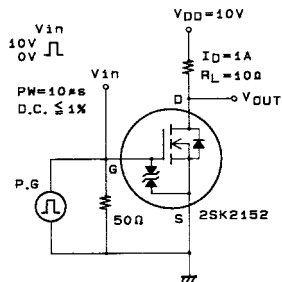
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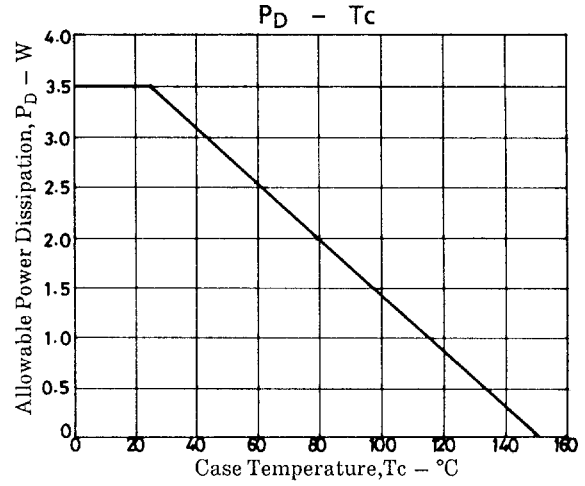
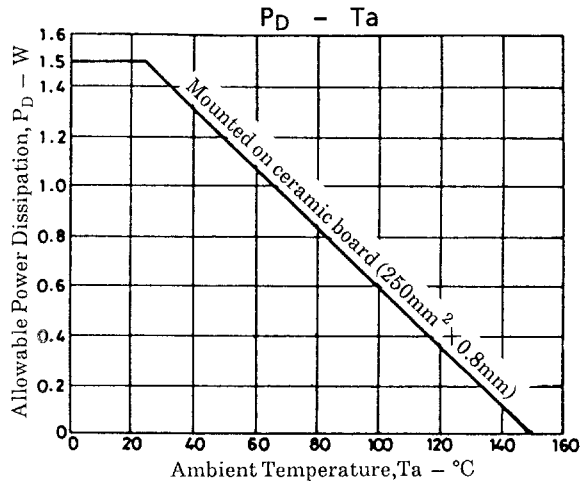
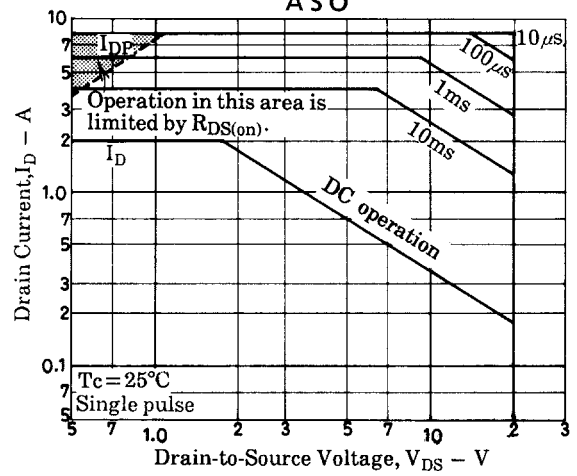
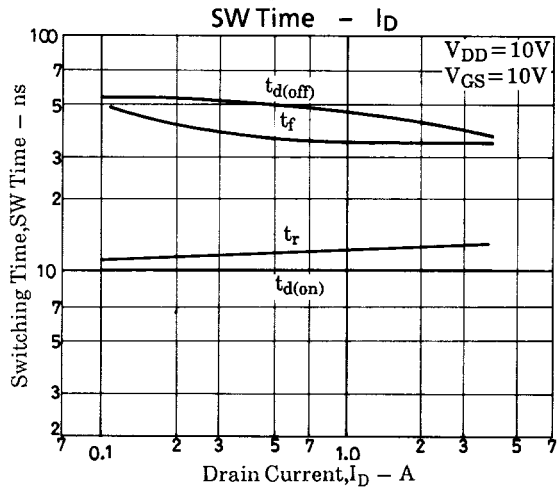
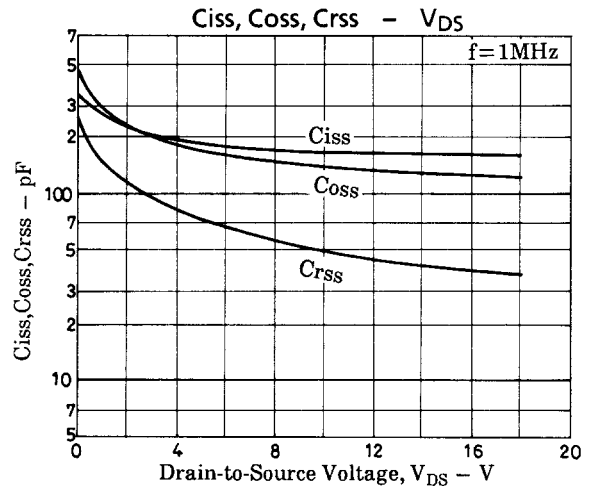
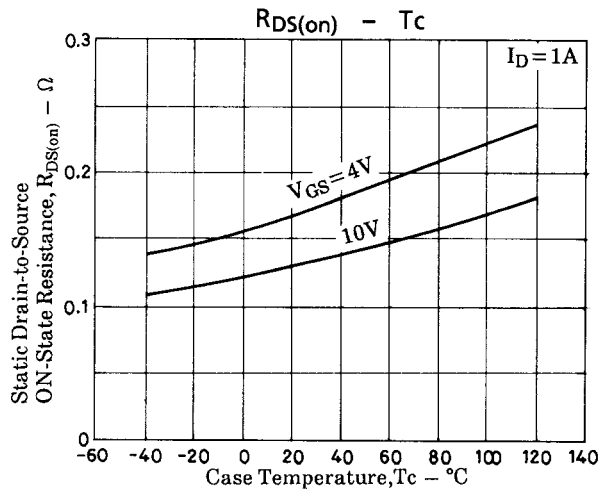
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=10V, f=1MHz$		170		pF
Output Capacitance	Coss	$V_{DS}=10V, f=1MHz$		145		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=10V, f=1MHz$		50		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	t_r	See specified Test Circuit		12		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		50		ns
Fall Time	t_f	See specified Test Circuit		35		ns
Diode Forward Voltage	V_{SD}	$I_S=2A, V_{GS}=0$		1.0		V

Switching Time Test Circuit





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