



2SK2951

N-Channel Silicon MOSFET

Ultrahigh-Speed Switching Applications

Features

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

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		200	V
Gate-to-Source Voltage	V _{GSS}		±20	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	Mounted on a ceramic board (250mm ² ×0.8mm)	1.5	W
		T _c =25°C	3.5	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	200			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =200V, V _{GS} =0			100	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±15V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	2.0		3.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =0.5A	0.4	0.8		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =0.5A, V _{GS} =10V		2.5	3.5	Ω
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		60		pF
Output Capacitance	C _{oss}	V _{DS} =20V, f=1MHz		18		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =20V, f=1MHz		7		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		18		ns
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0		1.0	1.5	V

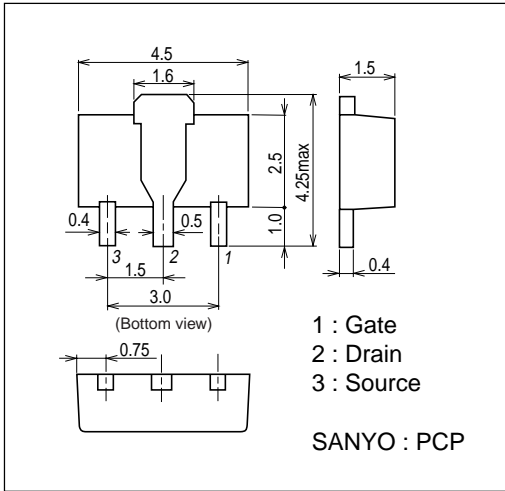
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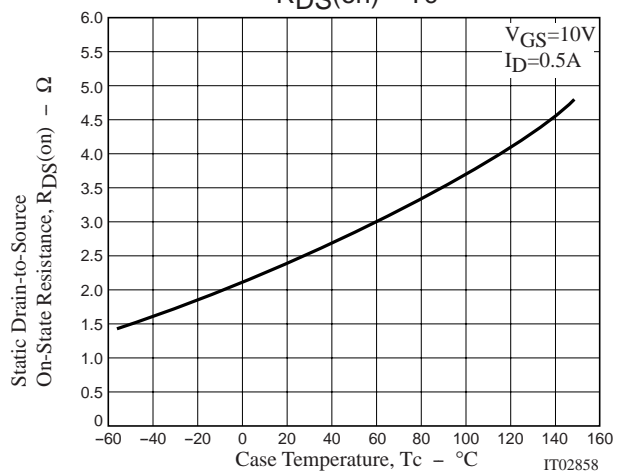
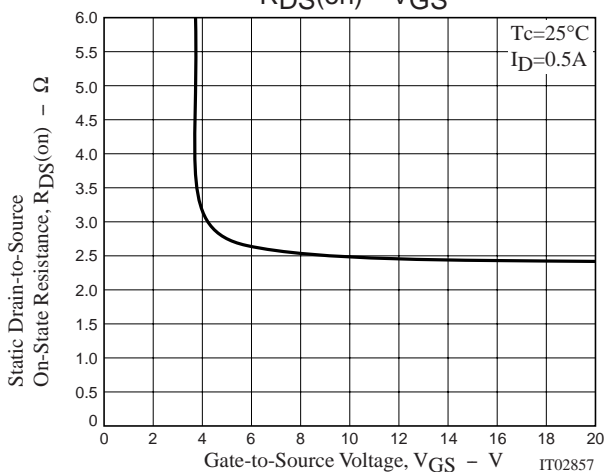
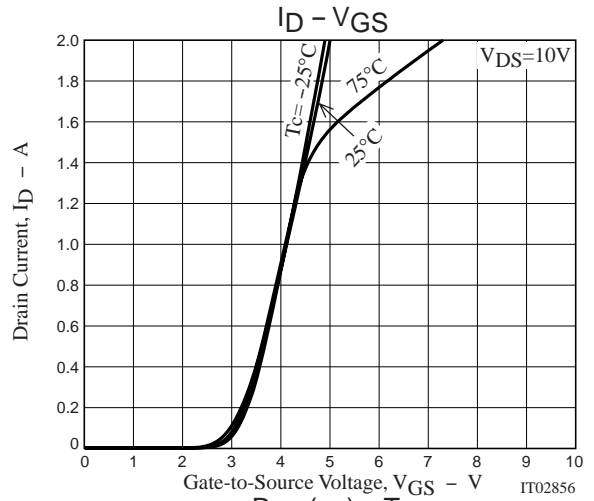
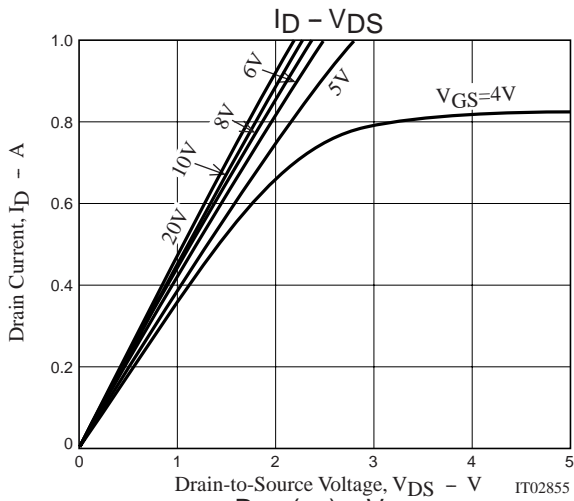
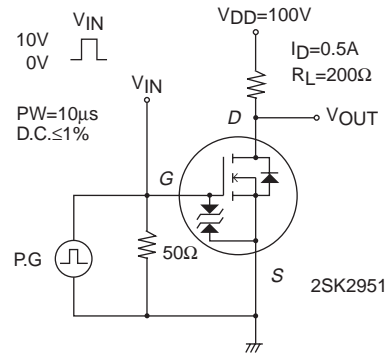
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Package Dimensions

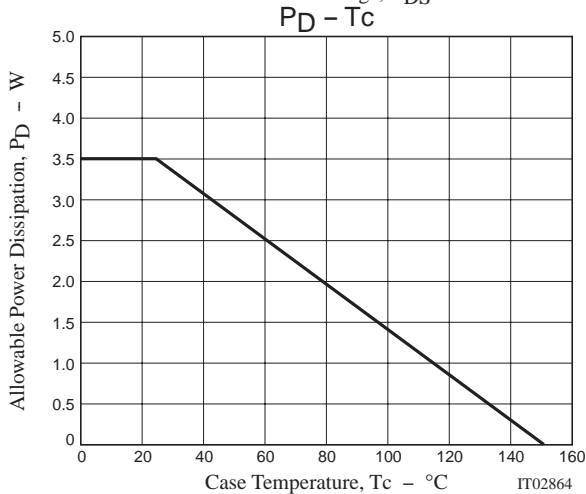
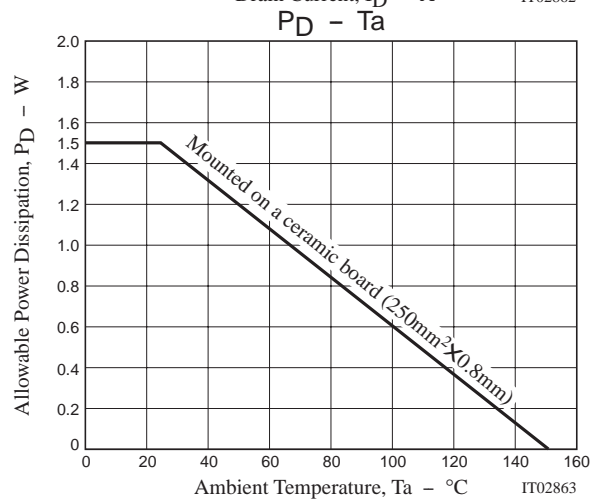
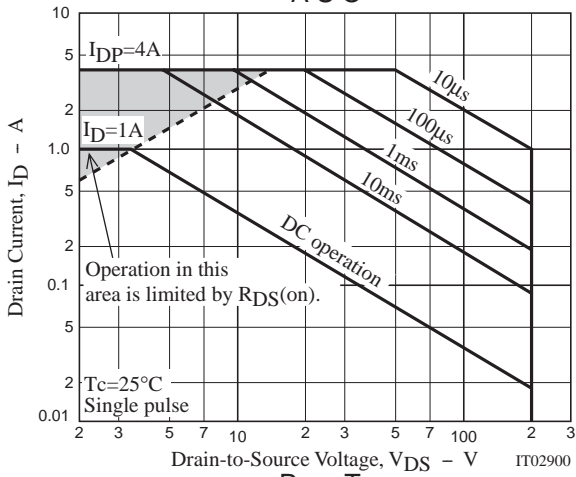
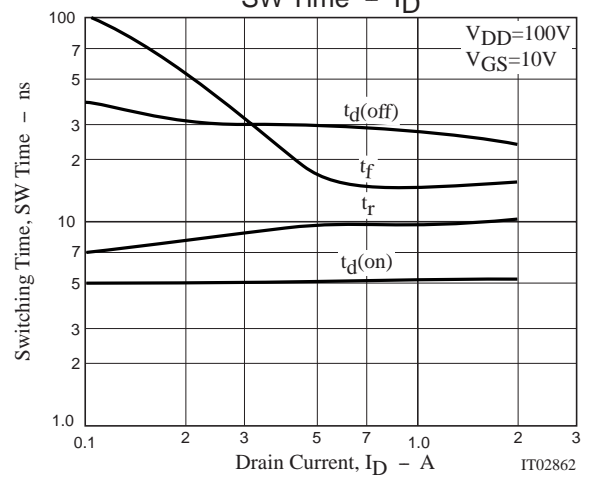
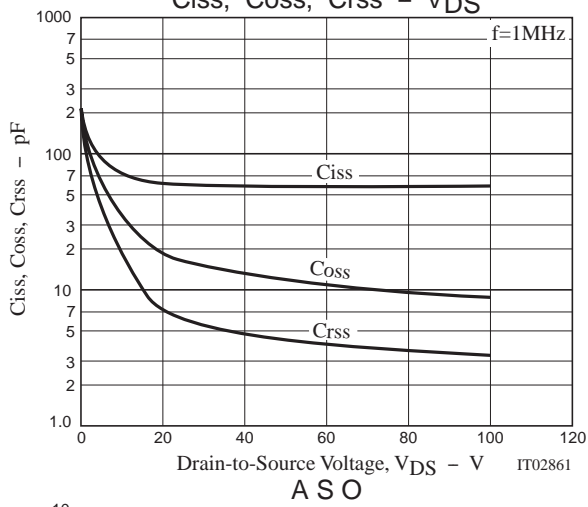
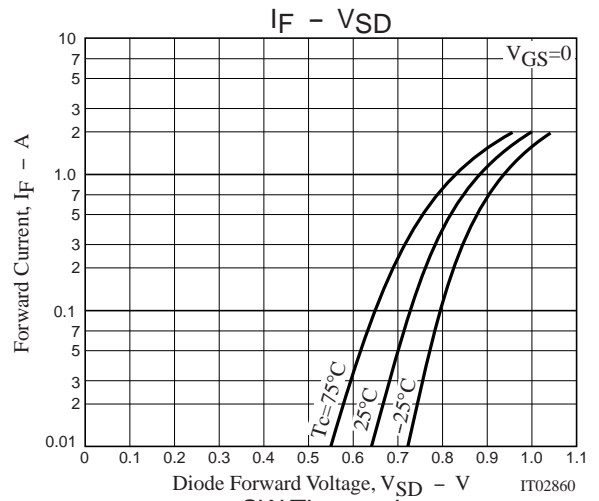
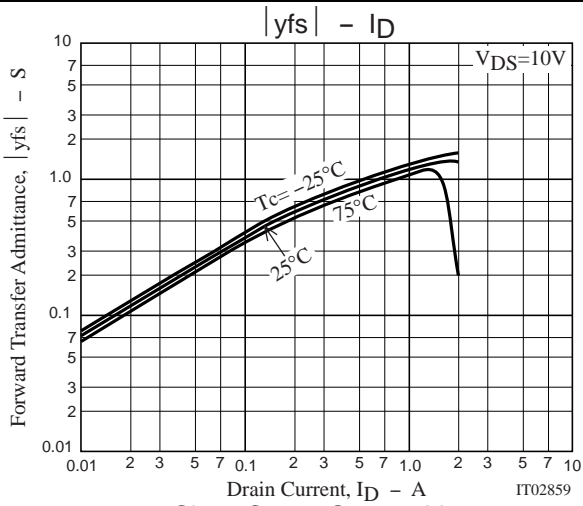
unit : mm
2062A



Switching Time Test Circuit



2SK2951



Note on usage : Since the 2SK2951 is designed for high-speed switching applications, please avoid using this device in the vicinity of highly charged objects.

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