



2SK2464

Ultrahigh-Speed Switching Applications

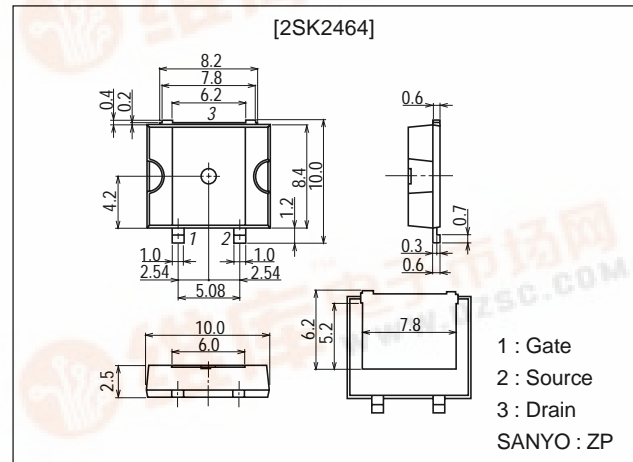
Features

- Low ON resistance.
- Ultrahigh-speed switching.
- Enables simplified fabrication, high-density mounting, and miniaturization in end products due to the surface mountable package.

Package Dimensions

unit:mm

2128



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		30	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		45	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	180	A
Allowable Power Dissipation	P _D	Tc=25°C	50	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	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0			100	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0			±100	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	2		4	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =22A	20	30		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =22A, V _{GS} =10V		8.5	12	mΩ
Input Capacitance	C _{iss1}	V _{DS} =0V, f=1MHz		3750	4300	pF
	C _{iss2}	V _{DS} =10V, f=1MHz		2700		pF
Output Capacitance	C _{oss}	V _{DS} =10V, f=1MHz		2300		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =10V, f=1MHz		450		pF

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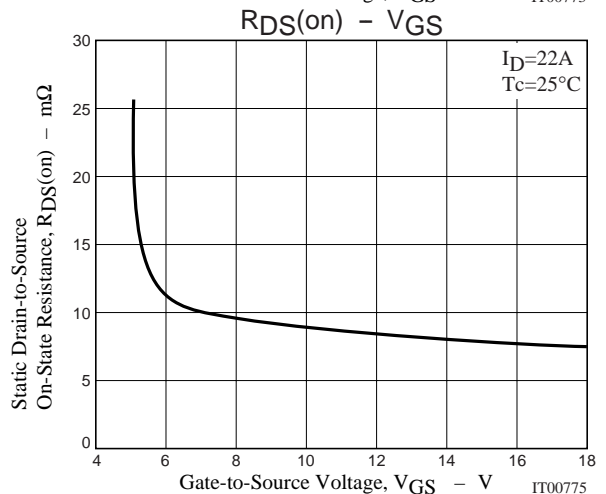
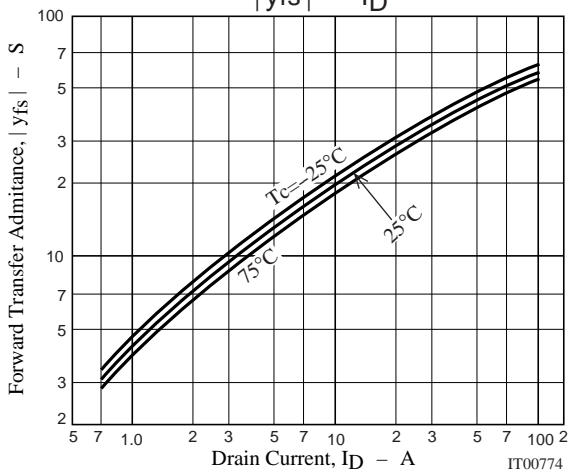
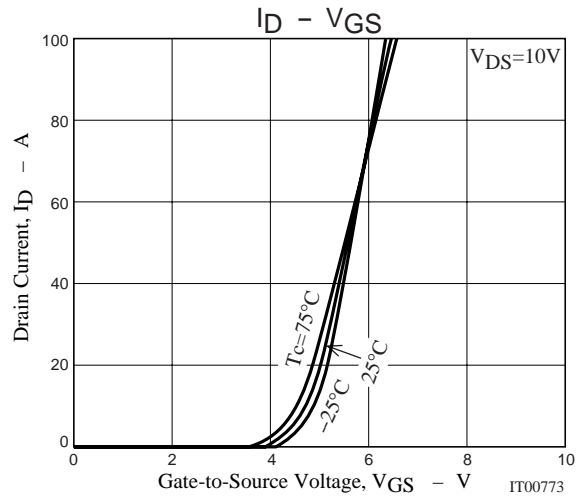
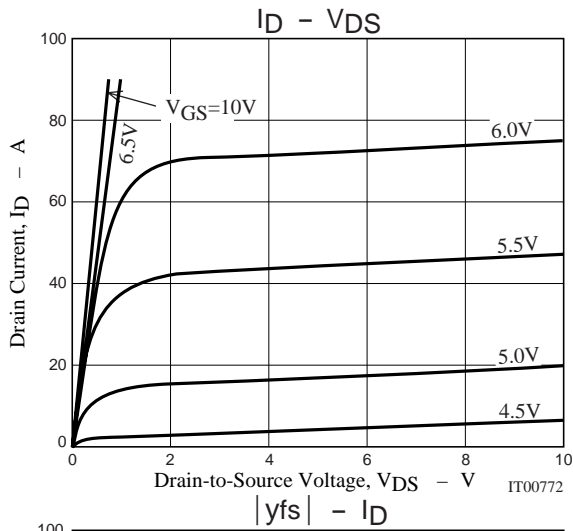
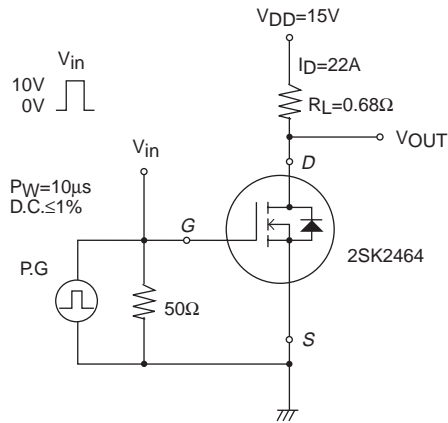


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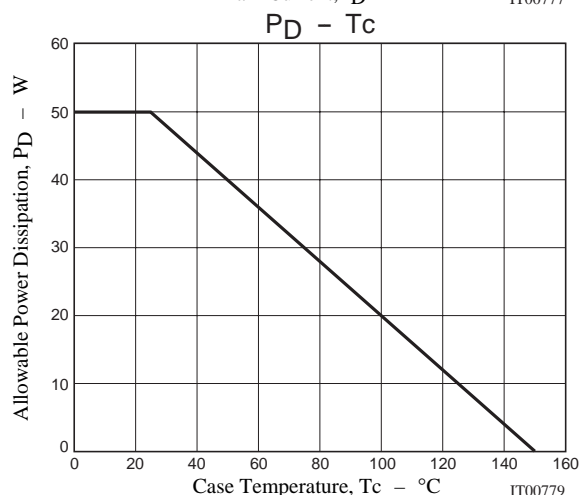
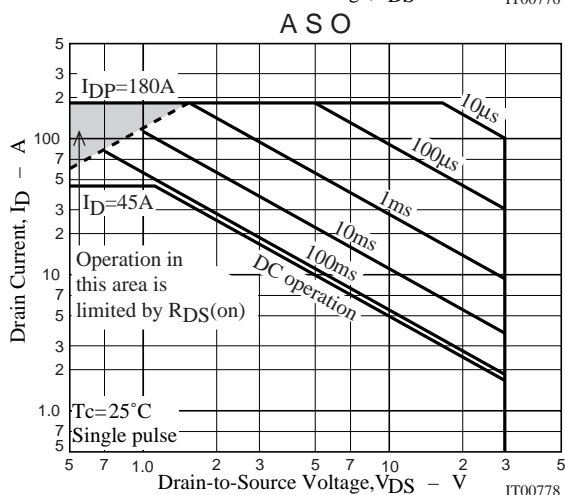
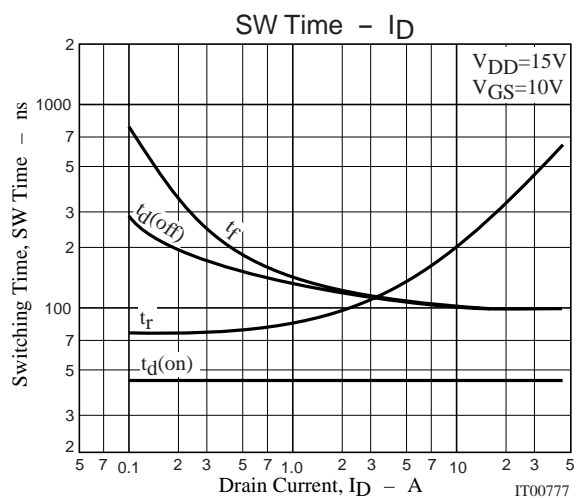
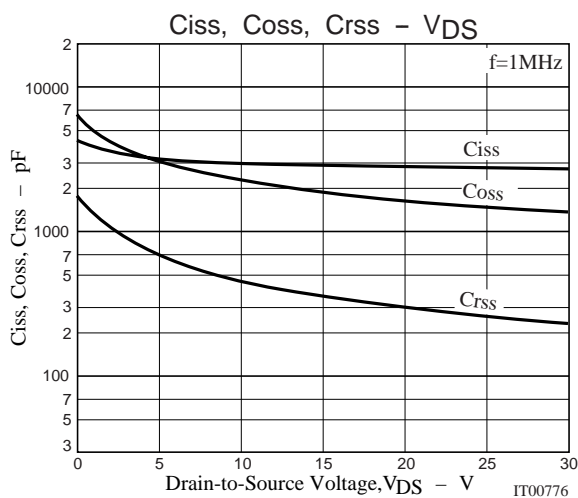
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		45		ns
Rise Time	t_r	See specified Test Circuit		350		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		100		ns
Fall Time	t_f	See specified Test Circuit		100		ns
Diode Forward Voltage	V_{SD}	$I_S=45A, V_{GS}=0$		1.0	1.5	V

Switching Time Test Circuit



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