

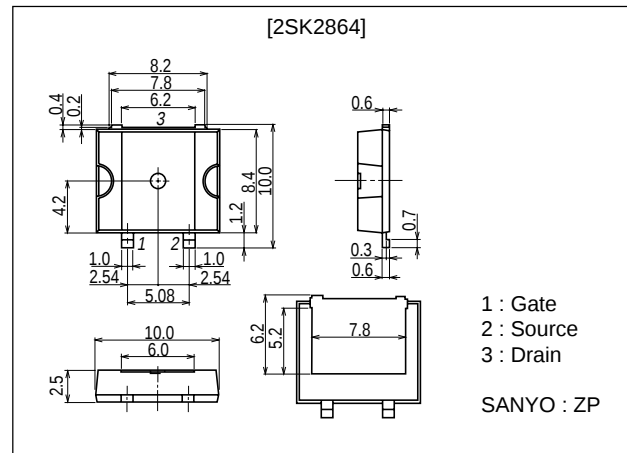
SANYO**Ultrahigh-Speed Switching Applications****Features**

- 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}		200	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		20	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	80	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	200			V
Gate-to-Source Breakdown Voltage	V _{(BR)GSS}	I _G =±100μA, V _{DS} =0	±20			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} =±16V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	2.0		4.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =10A	6	10		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =10A, V _{GS} =10V		90	120	mΩ

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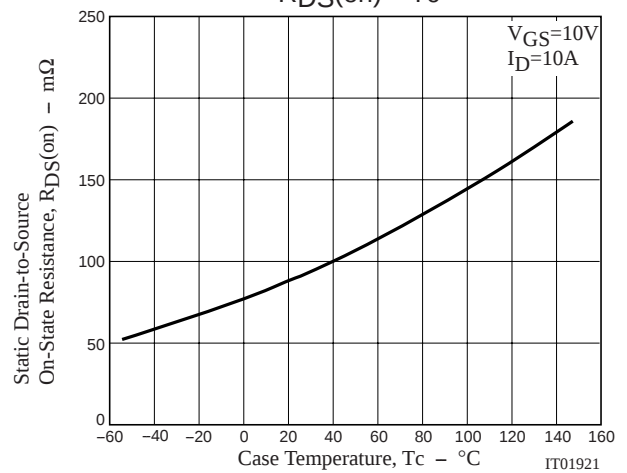
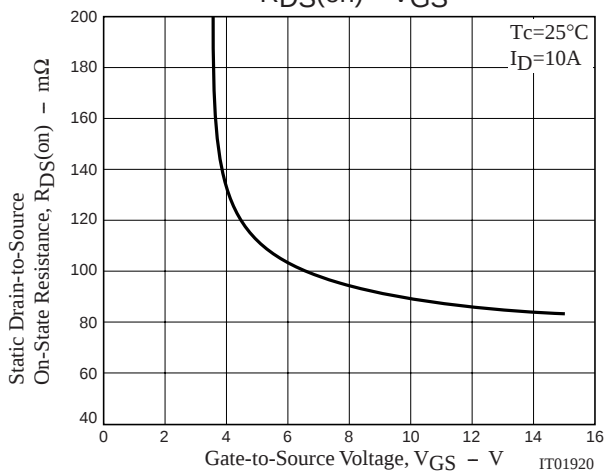
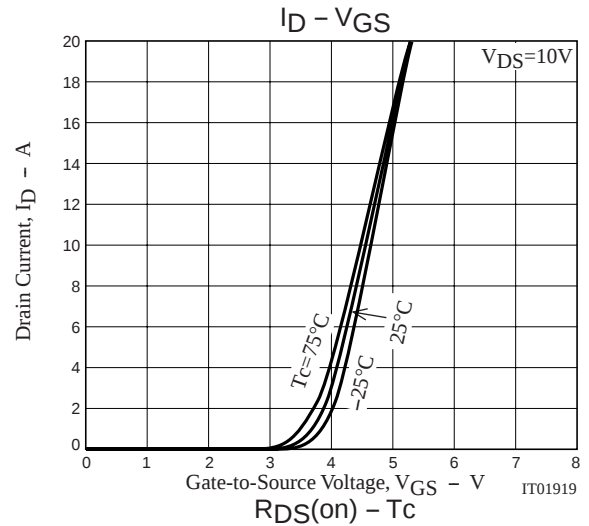
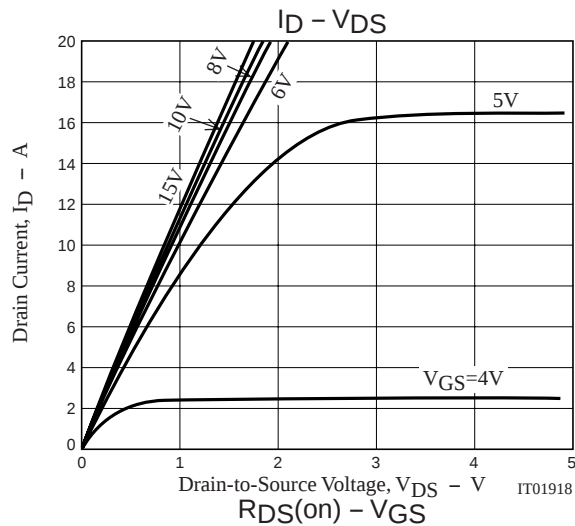
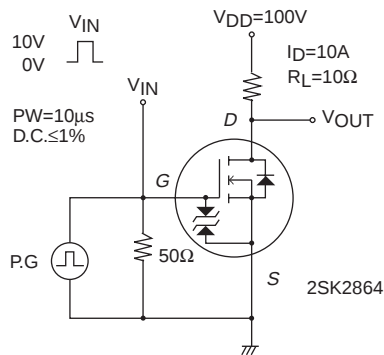
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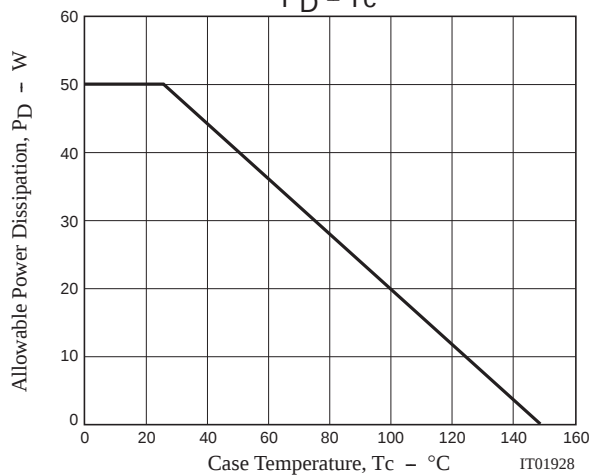
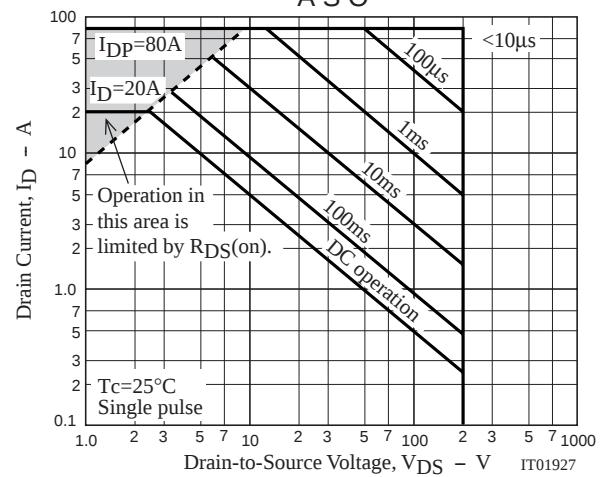
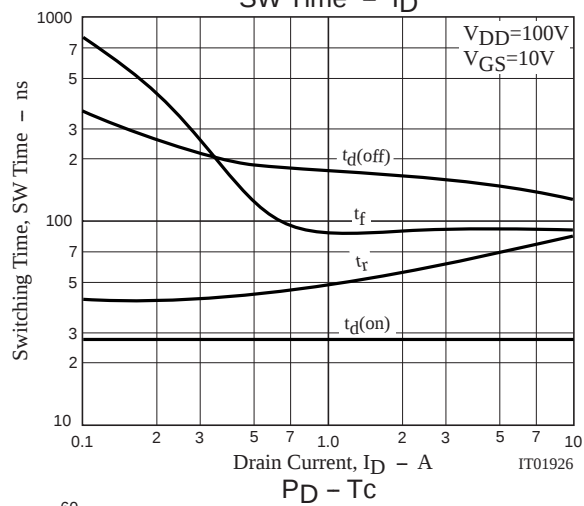
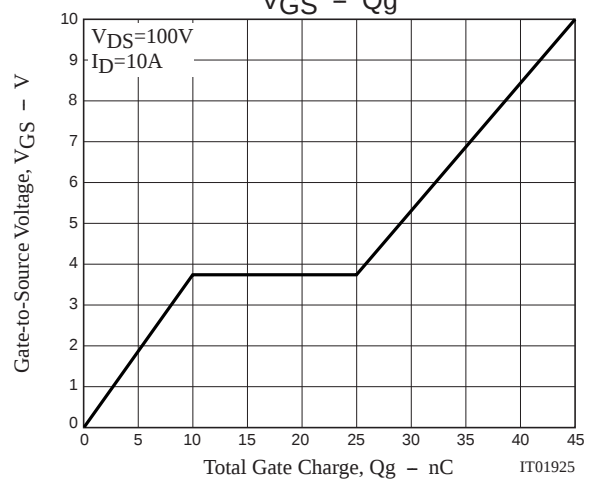
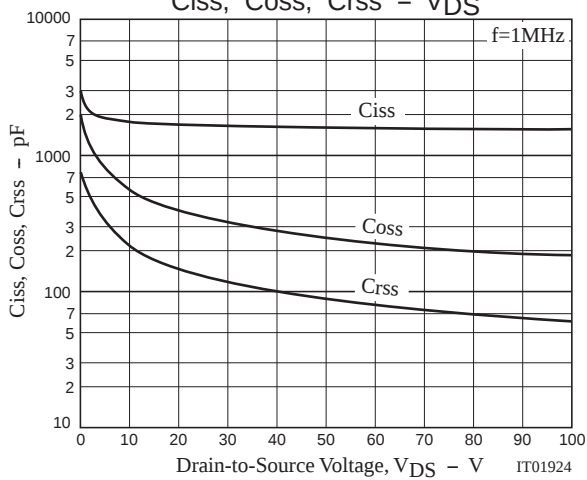
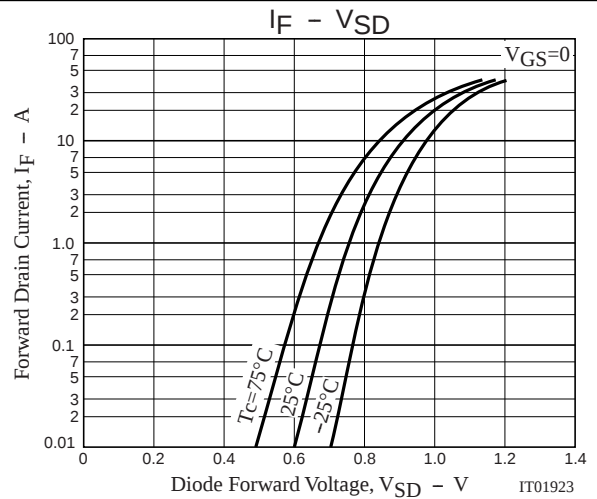
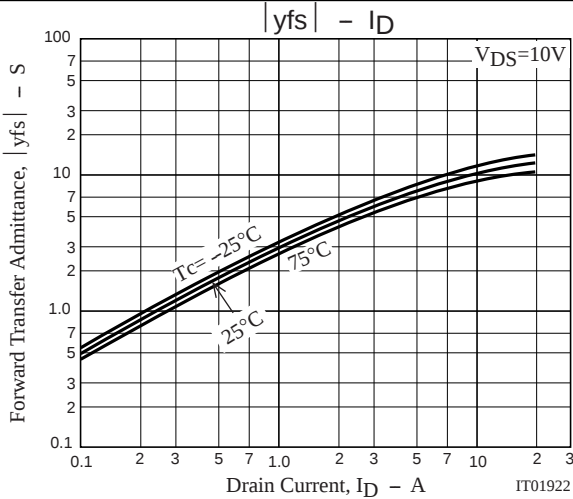
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss1	$V_{DS}=0$, $f=1\text{MHz}$		3000	3800	pF
	Ciss2	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		1700	2150	pF
Output Capacitance	Coss	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		400	420	pF
Reverse Transfer Capacitance	Crss	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		150	185	pF
Turn-ON Delay Time	$t_d(\text{on})$	See specified Test Circuit		28	35	ns
Rise Time	t_r	See specified Test Circuit		85	110	ns
Turn-OFF Delay Time	$t_d(\text{off})$	See specified Test Circuit		130	165	ns
Fall Time	t_f	See specified Test Circuit		90	105	ns
Diode Forward Voltage	V_{SD}	$I_S=20\text{A}$, $V_{GS}=0$		1.0	1.5	V
Gate resistance	R_g	$f=1\text{MHz}$	1.0	2.0	3.0	Ω

Switching Time Test Circuit





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