

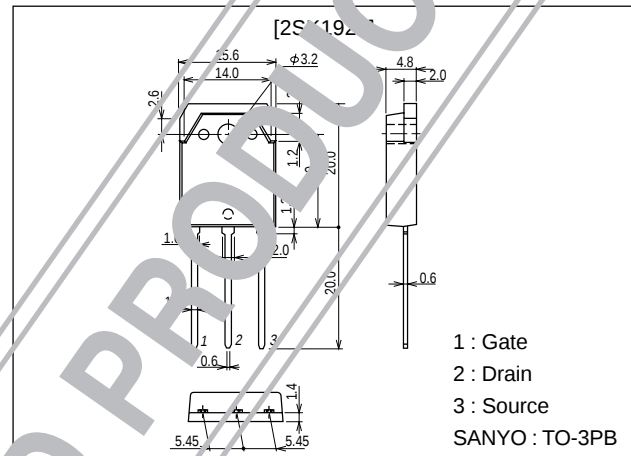
SANYO**2SK1925****Ultrahigh-Speed Switching Applications****Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- High-speed diode ($t_{rr}=150\text{ns}$).

Package Dimensions

unit:mm

2056A

**Specifications****Absolute Maximum Ratings** at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		600	V
Gate-to-Source Voltage	V_{GS}		± 30	V
Drain Current (DC)	I_D		8	A
Drain Current (pulse)	I_{DP}		32	A
Allowable Power Dissipation	P_D	$T_c=25^\circ\text{C}$	2.5	W
Channel Temperature	T_{ch}		120	W
Storage Temperature	T_{stg}		150	$^\circ\text{C}$
			-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V_{DS}	$I_D=10\text{mA}$, $V_{GS}=0$	600			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=480\text{V}$, $V_{GS}=0$			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 30\text{V}$, $V_{DS}=0$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	2.0		3.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $I_D=4\text{A}$	2.8	5.5		S
Static Drain-to-Source On-state Resistance	$R_{DS(on)}$	$I_D=4\text{A}$, $V_{GS}=10\text{V}$		0.9	1.2	Ω

(Note) Be careful in handling the 2SK1925 because it has no protection diode between gate and source.

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■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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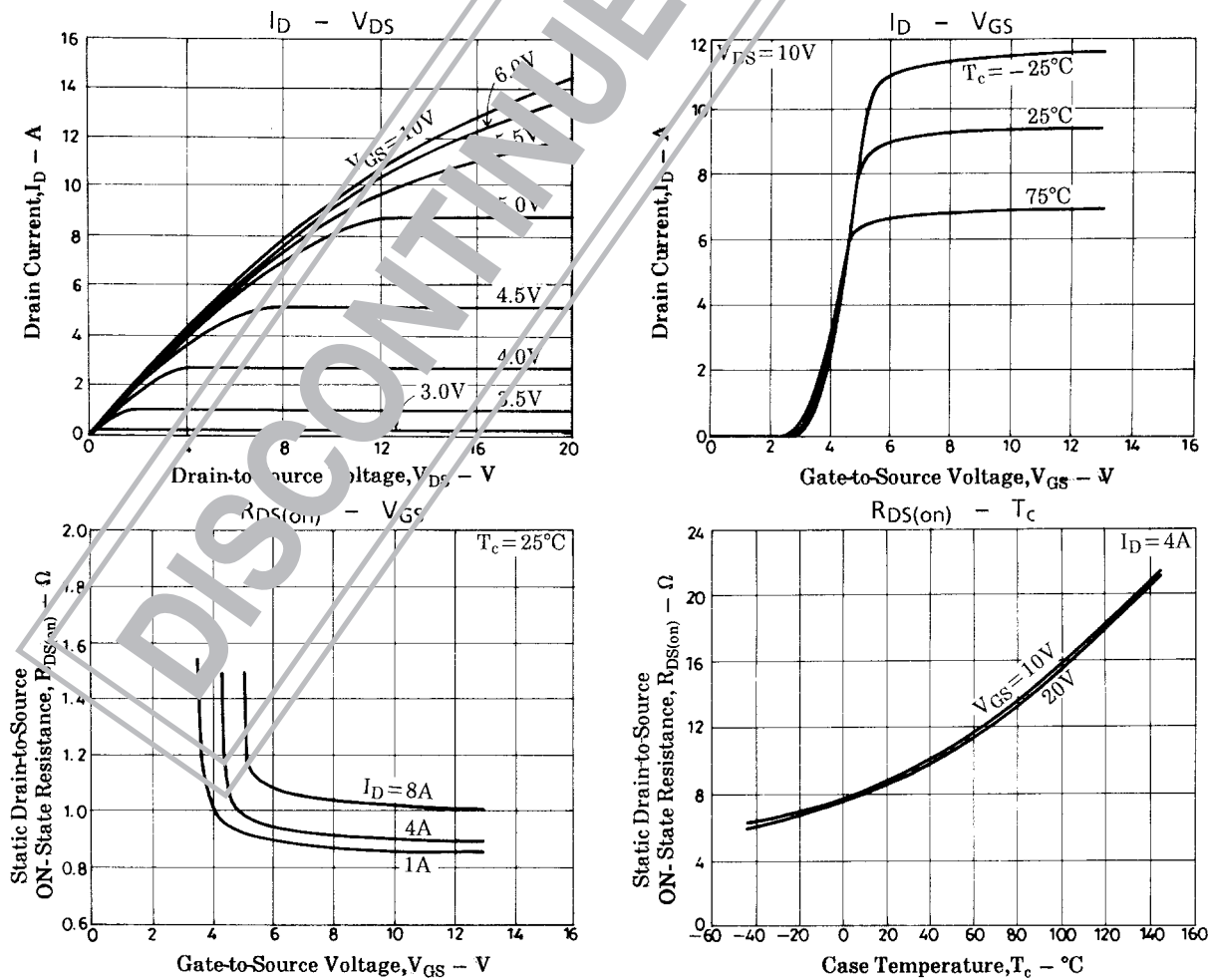
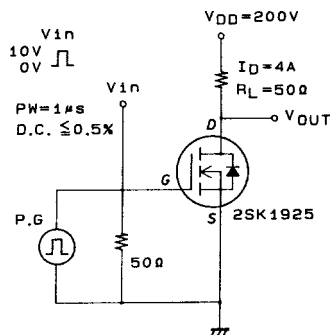
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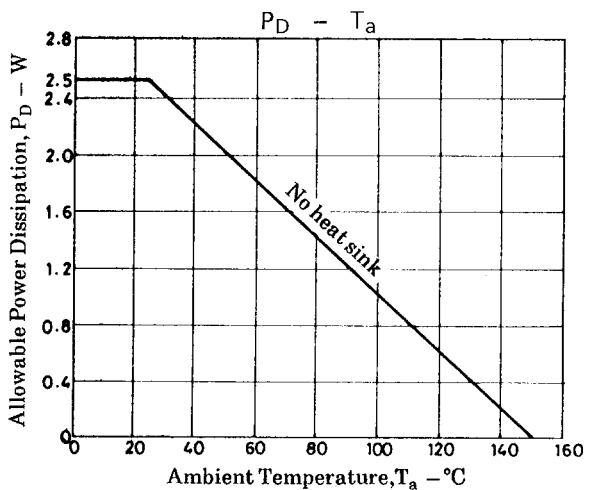
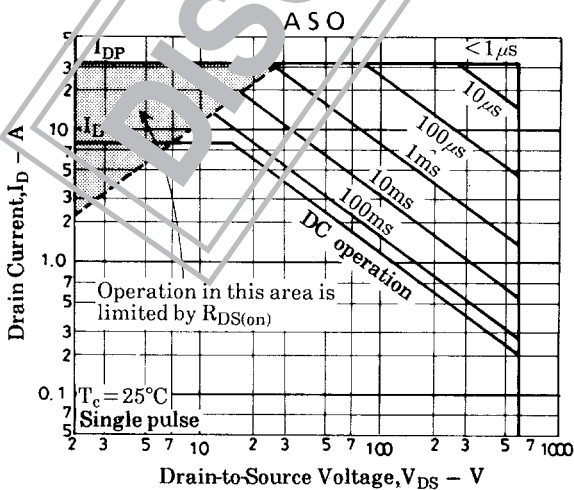
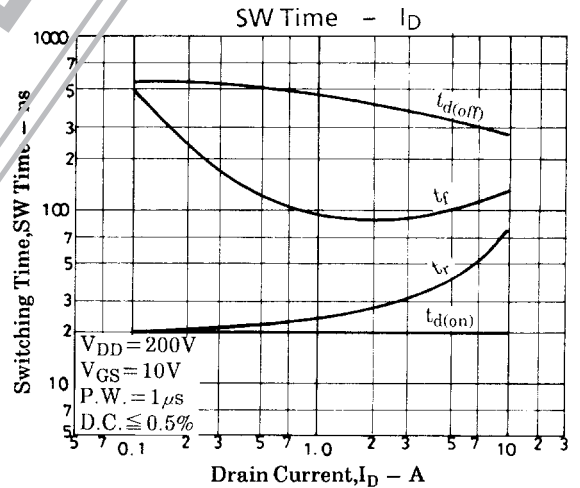
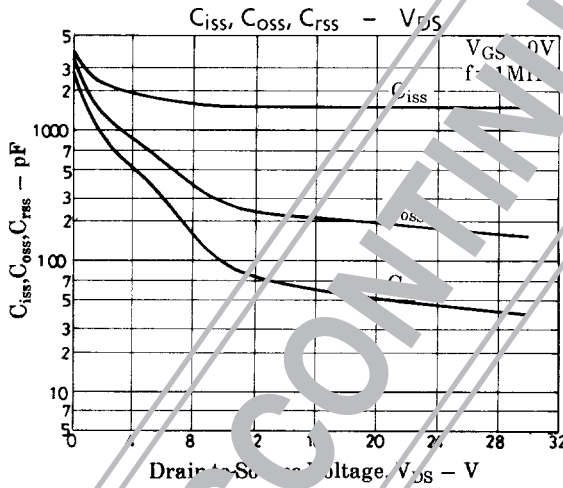
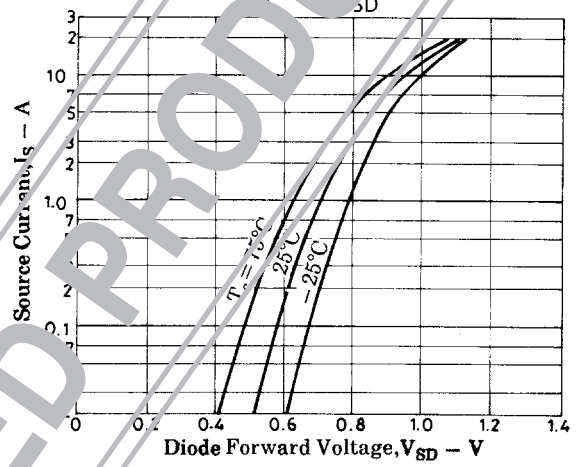
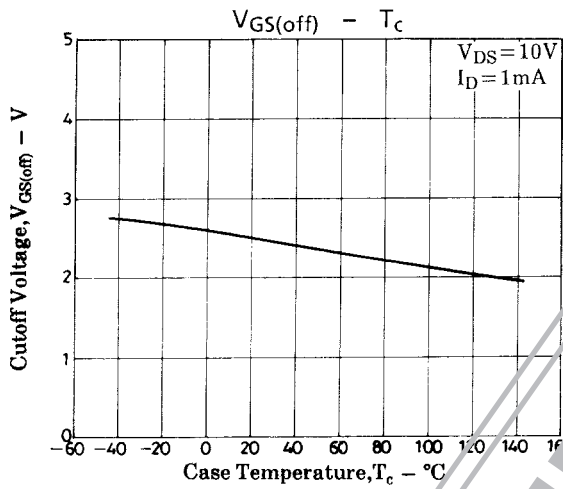
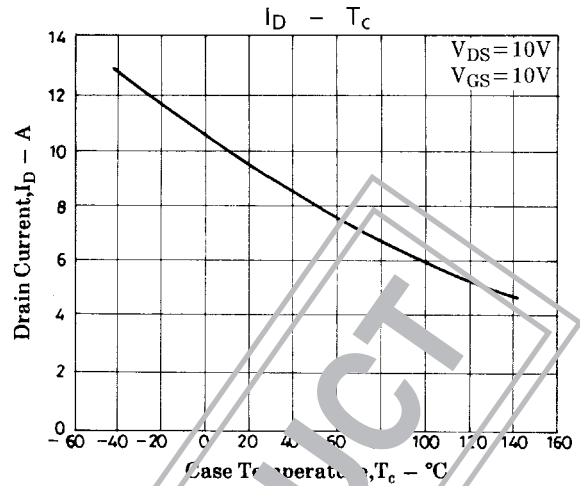
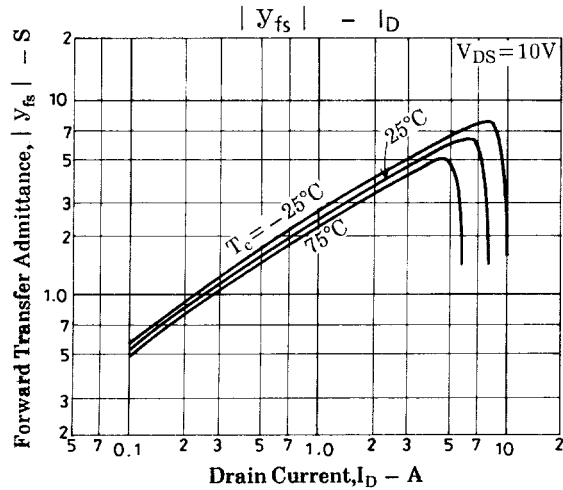
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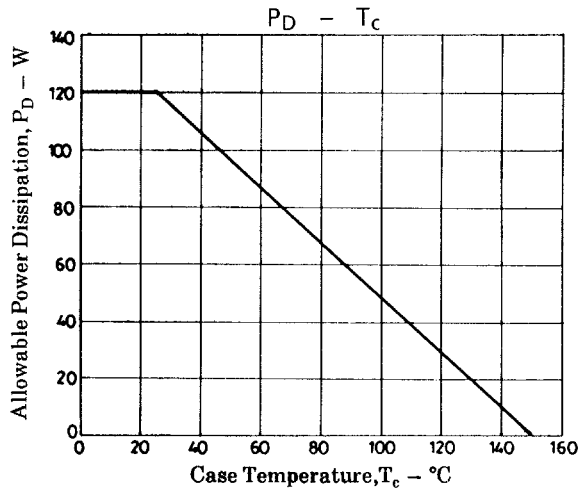
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=20V, f=1MHz$		1500		pF
Output Capacitance	Coss	$V_{DS}=20V, f=1MHz$		190		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=20V, f=1MHz$		50		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		20		ns
Rise Time	t_r	See specified Test Circuit.		35		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		350		ns
Fall Time	t_f	See specified Test Circuit.		100		ns
Diode Forward Voltage	V_{SD}	$I_S=8A, V_{GS}=0$			1.5	V
Diode Reverse Recovery Time	t_{rr}	$I_S=8A, di/dt=100A/\mu s$		150		ns

Switching Time Test Circuit







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