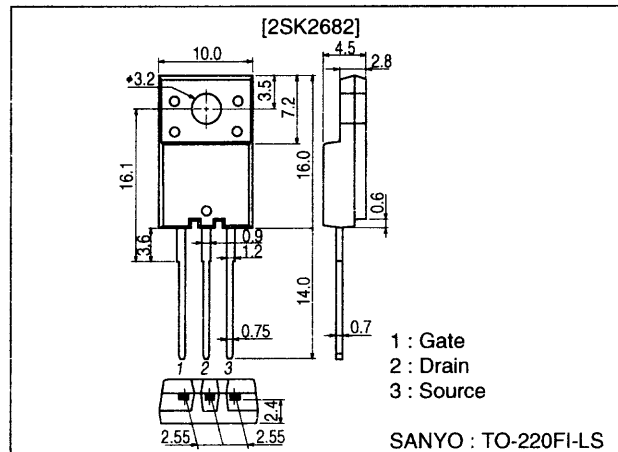


**SANYO****2SK2682****Ultrahigh-Speed Switching Applications****Features**

- Low ON-resistance.
- High-speed diode.
- Micaless package facilitating mounting.

**Package Dimensions**

unit : mm  
2078B

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DS}$		250	V
Gate-to-Source Voltage	$V_{GS}$		$\pm 30$	V
Drain Current (DC)	$I_D$		13	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu s$ , duty cycle $\leq 1\%$	52	A
Allowable Power Dissipation	$P_D$		2	W
		$T_c=25^\circ\text{C}$	35	W
Channel Temperature	$T_{ch}$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-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	$V_{(BR)DSS}$	$I_D=1\text{mA}$ , $V_{GS}=0$	250			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=\pm 100\mu A$ , $V_{DS}=0$	$\pm 30$			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=250\text{V}$ , $V_{GS}=0$			1.0	mA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 25\text{V}$ , $V_{DS}=0$			$\pm 10$	$\mu A$
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} $	$V_{DS}=10\text{V}$ , $I_D=6\text{A}$	6	10		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=6\text{A}$ , $V_{GS}=10\text{V}$		200	270	$m\Omega$

Continued on next page.

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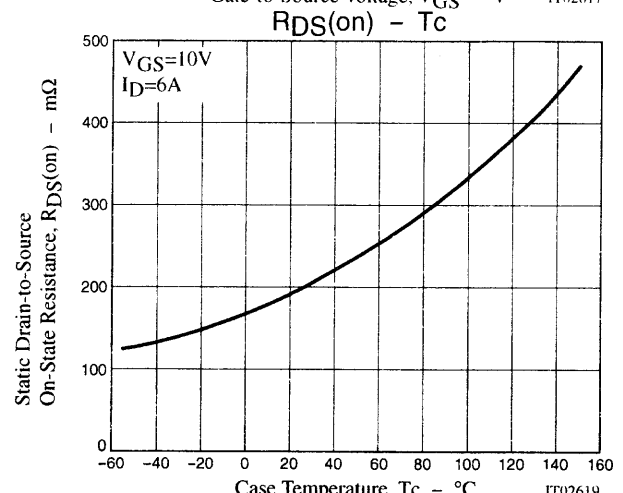
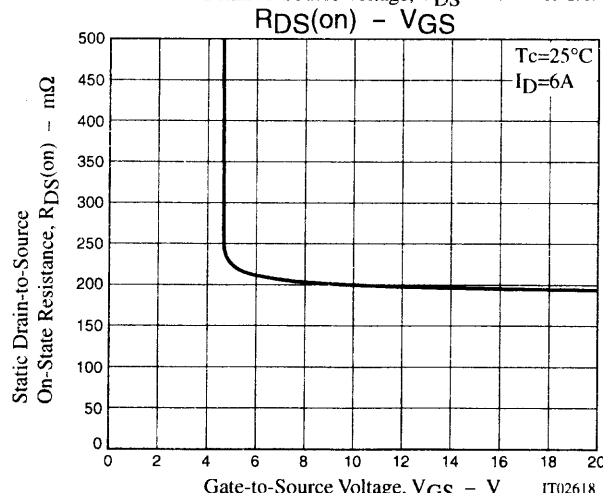
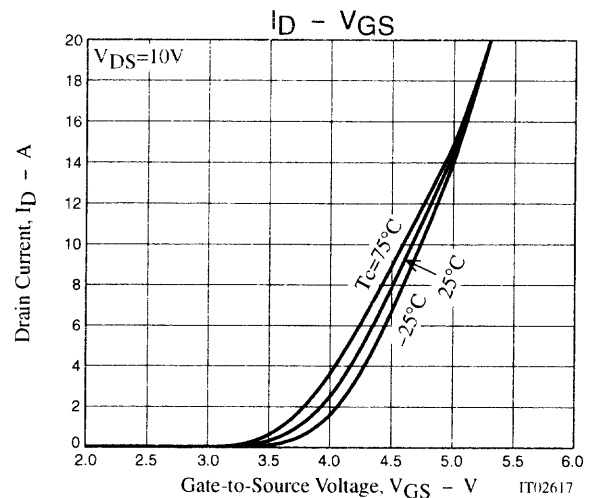
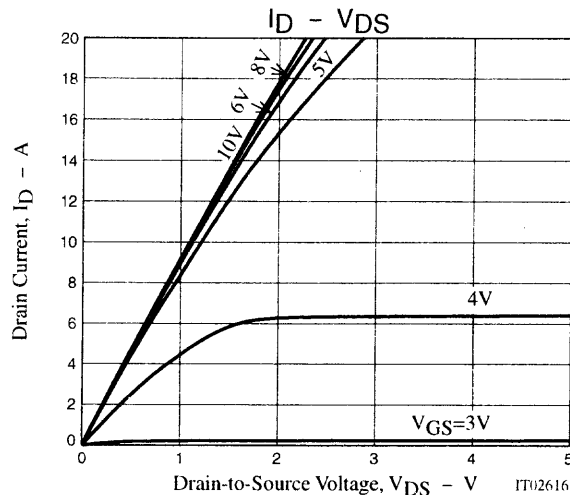
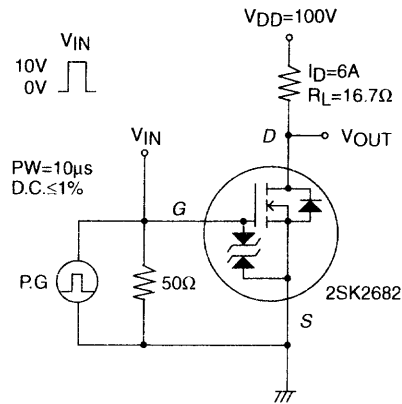
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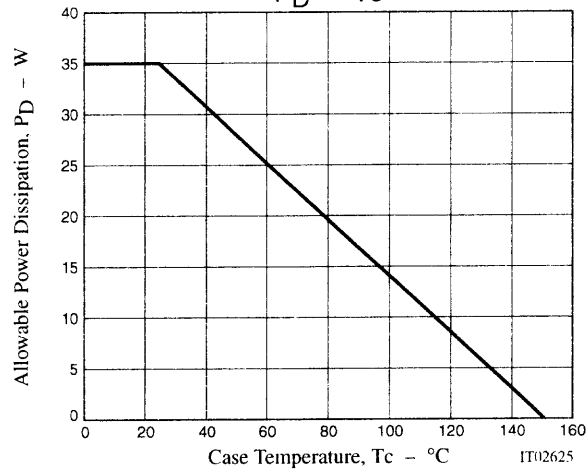
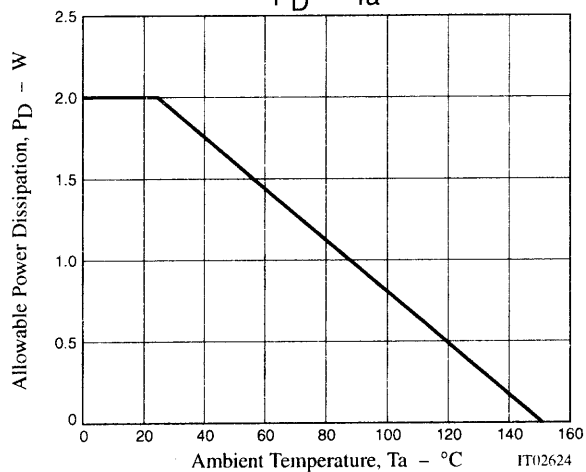
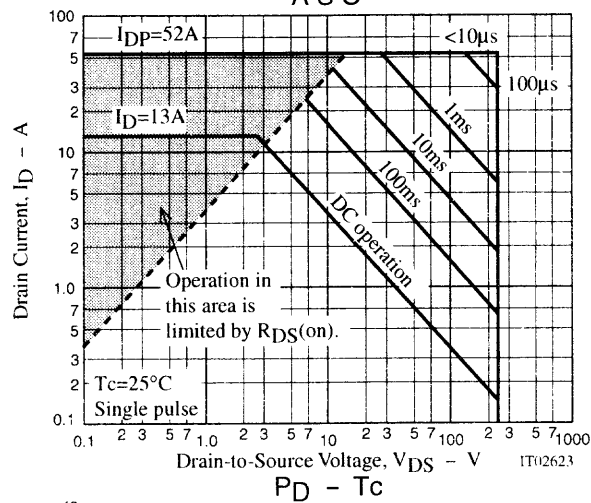
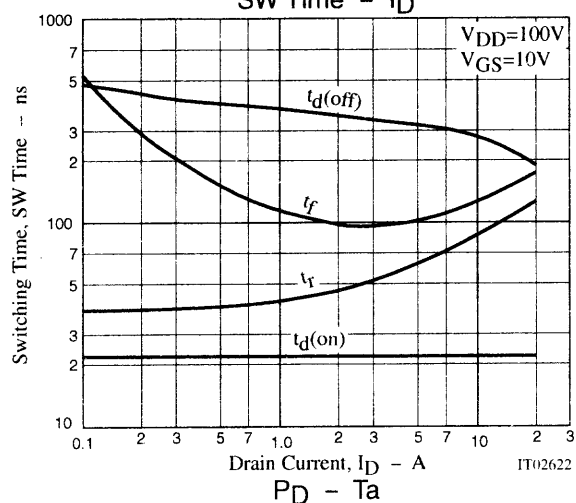
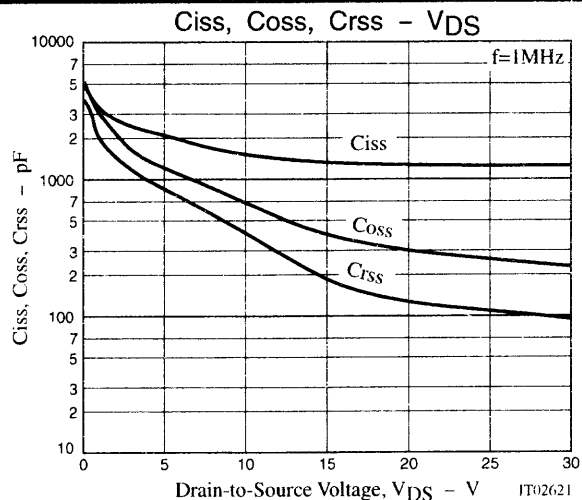
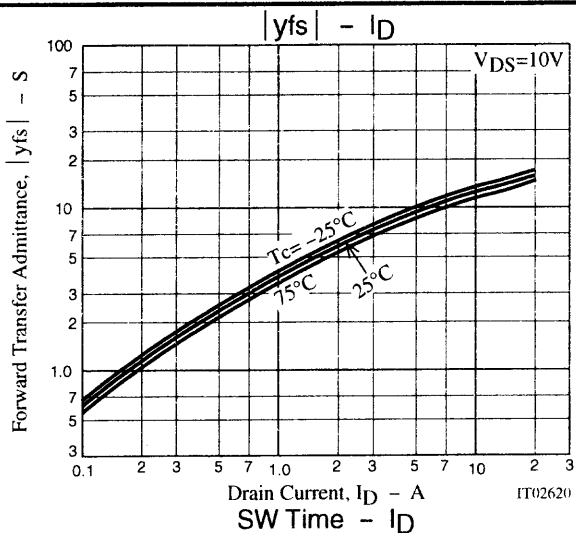
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		1290		pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$		300		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$		125		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		22		ns
Rise Time	$t_r$	See specified Test Circuit		66		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit		320		ns
Fall Time	$t_f$	See specified Test Circuit		105		ns
Diode Forward Voltage	$V_{SD}$	$I_S=12A, V_{GS}=0$		1.0	1.5	V
Diode Reverse Recovery Time	$t_{rr}$	$I_S=12A, di/dt=100A/\mu s$		160		ns

Marking : K2682

### Switching Time Test Circuit





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