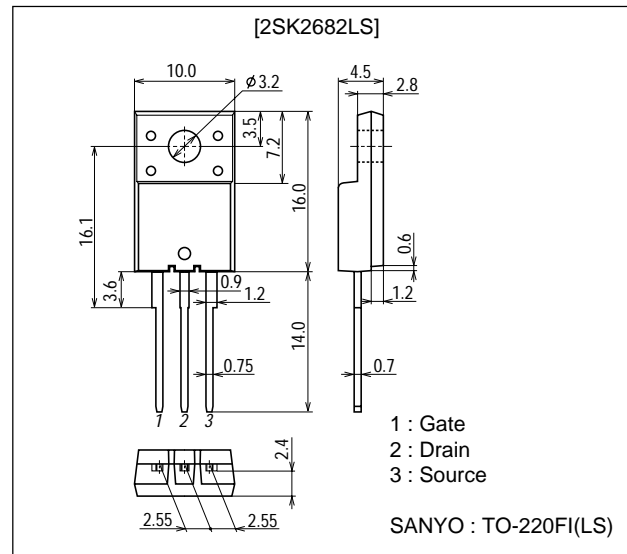


**2SK2682LS****Ultrahigh-Speed Switching Applications****Features**

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

Package Dimensionsunit : mm
2078C**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}		± 30	V
Drain Current (DC)	I_D		13	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, 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	$V_{(BR)GSS}$	$I_G=\pm 100\mu\text{A}$, $V_{GS}=0$	± 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}	$V_{GS}=\pm 25\text{V}$, $V_{DS}=0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	2.0		3.0	V

Continued on next page.

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N1501 TS IM TA-3431 / N1500 TS IM TA-3044 No.6783-1/4

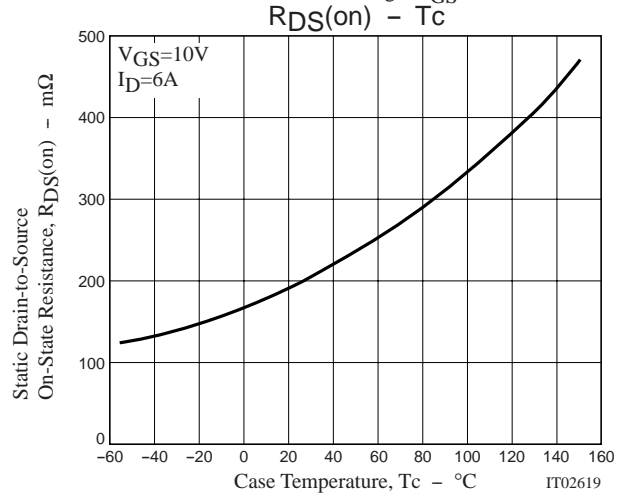
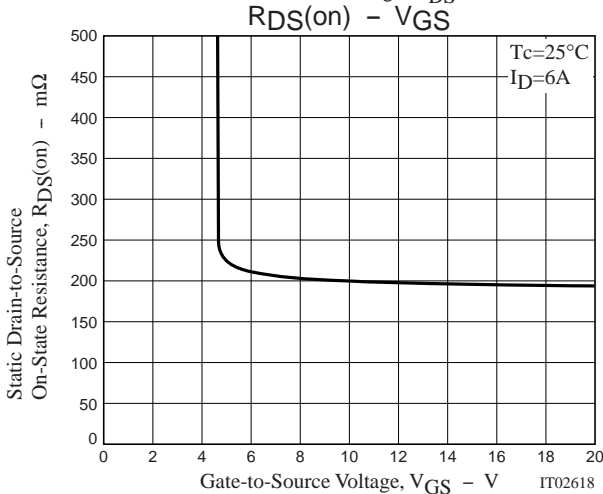
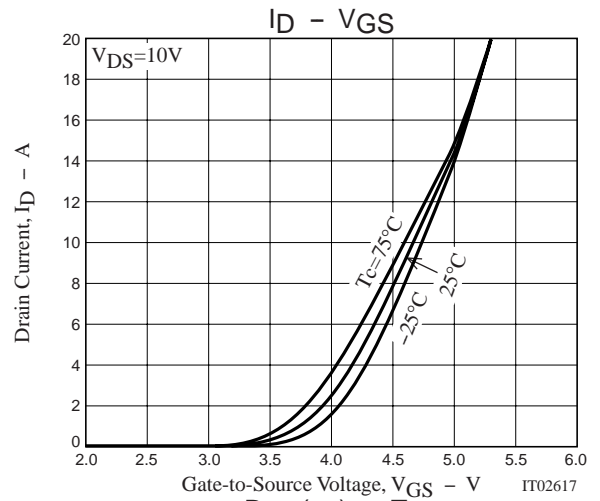
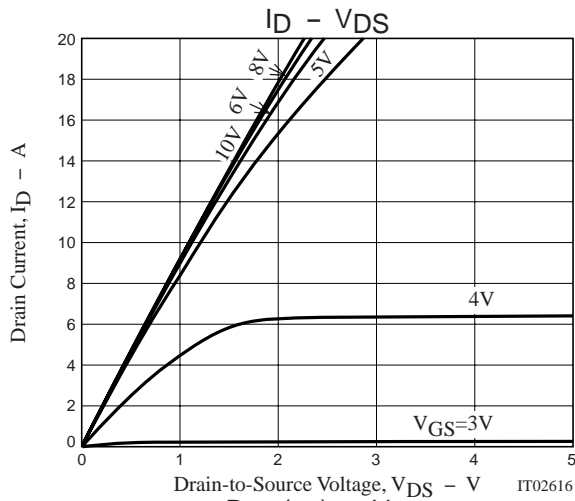
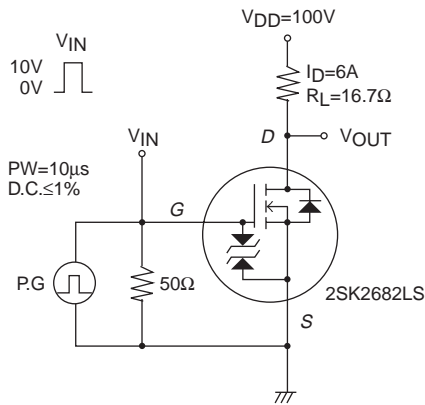
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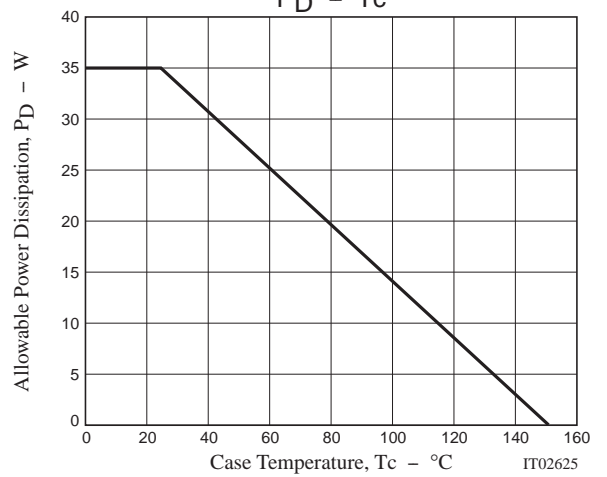
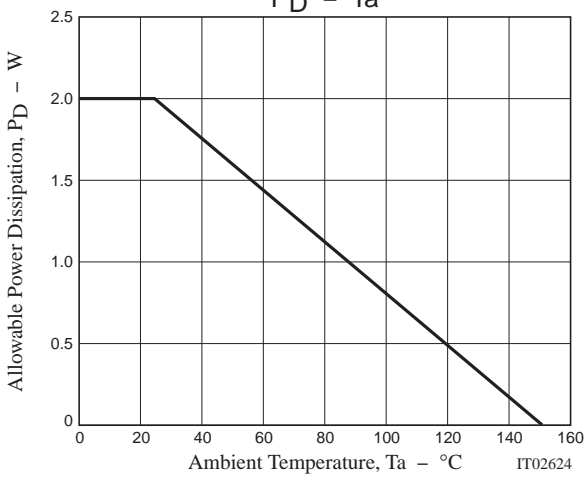
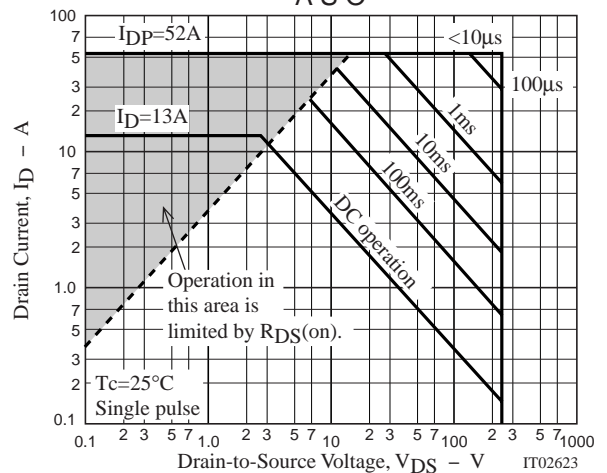
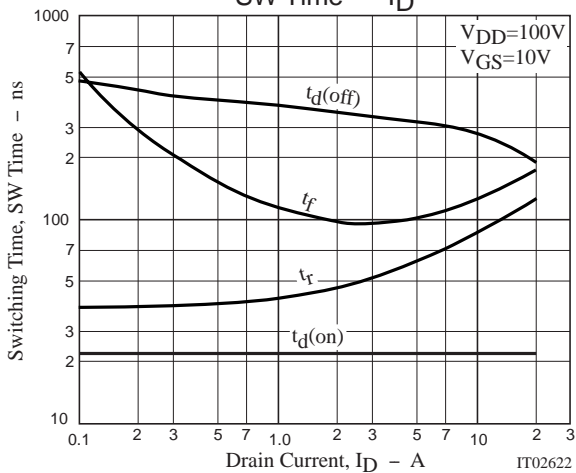
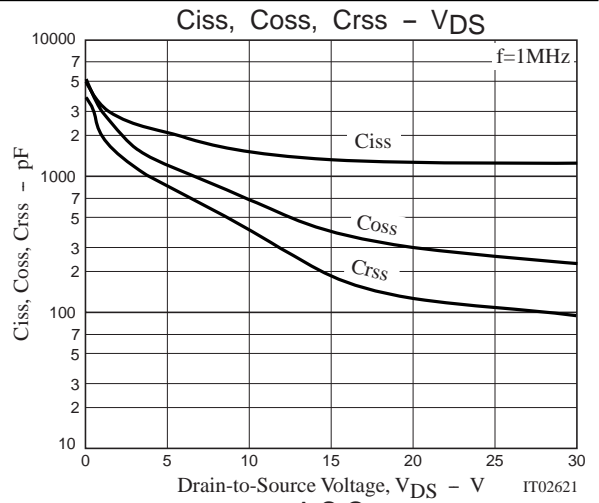
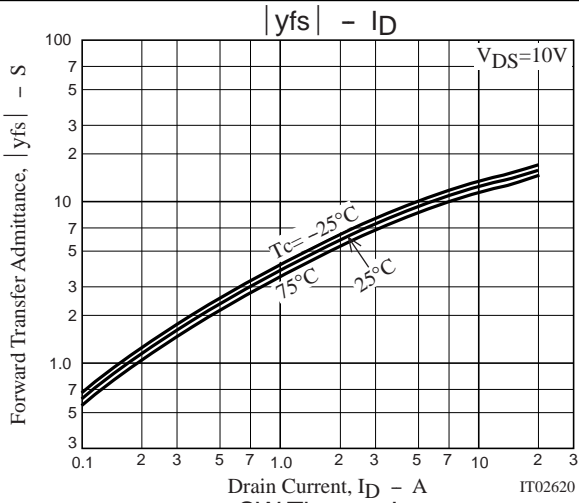
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=6A$	6	10		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=6A, V_{GS}=10V$		200	270	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		1290		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		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



2SK2682LS



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