



# 2SK2682LS

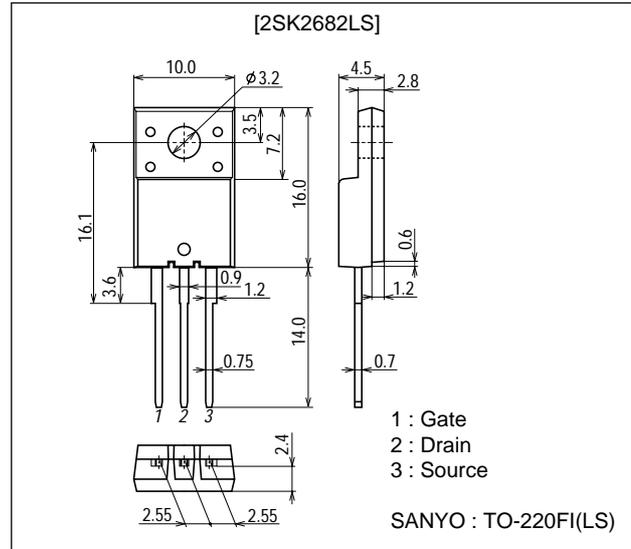
## Ultrahigh-Speed Switching Applications

### Features

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

### Package Dimensions

unit : mm  
2078C



### Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		250	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±30	V
Drain Current (DC)	I <sub>D</sub>		13	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	52	A
Allowable Power Dissipation	P <sub>D</sub>		2	W
		T <sub>c</sub> =25°C	35	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> =1mA, V <sub>GS</sub> =0	250			V
Gate-to-Source Breakdown Voltage	V <sub>(BR)GSS</sub>	I <sub>G</sub> =±100μA, V <sub>GS</sub> =0	±30			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =250V, V <sub>GS</sub> =0			1.0	mA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±25V, V <sub>DS</sub> =0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	2.0		3.0	V

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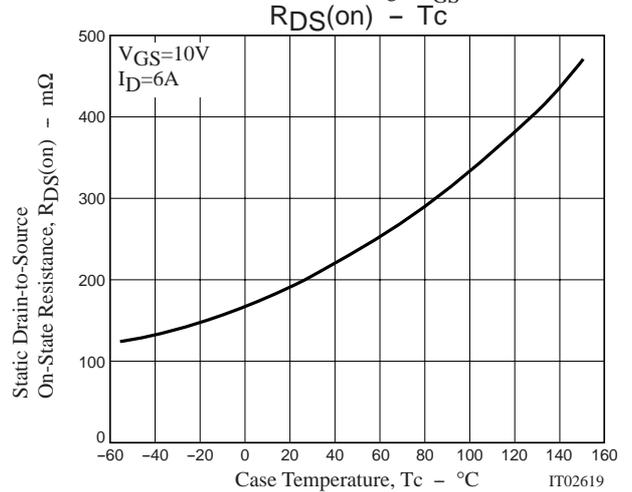
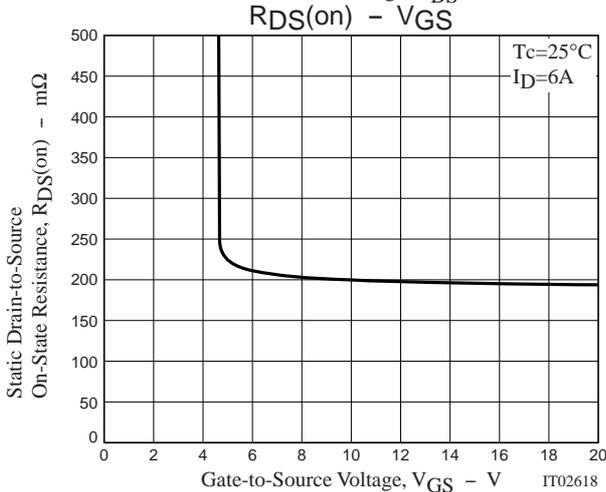
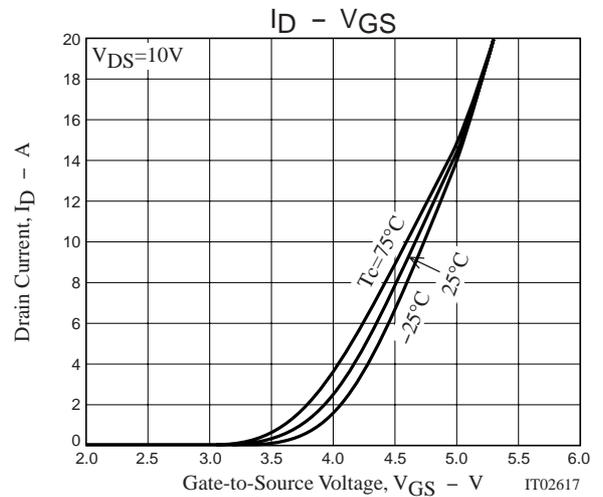
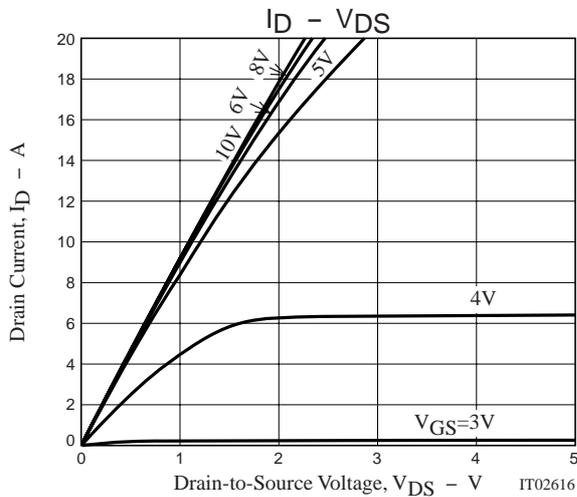
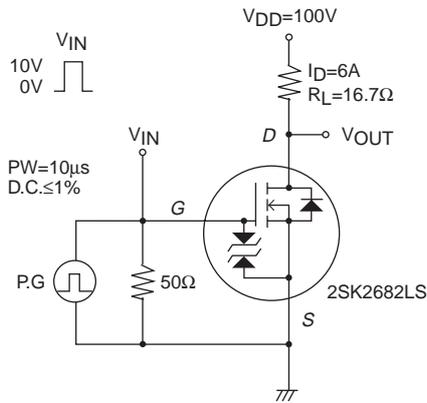
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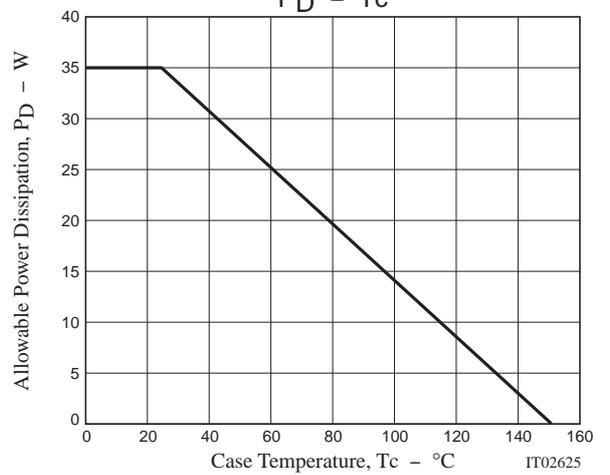
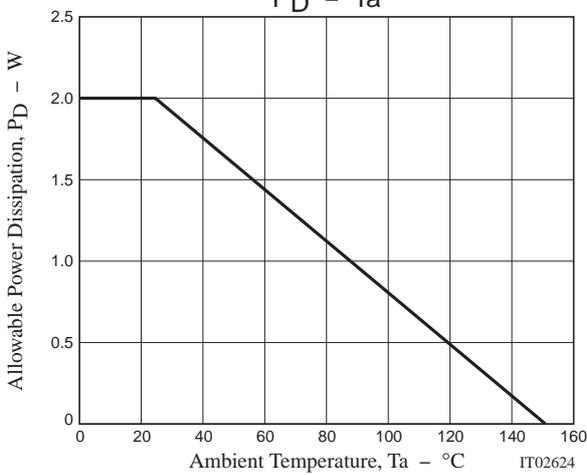
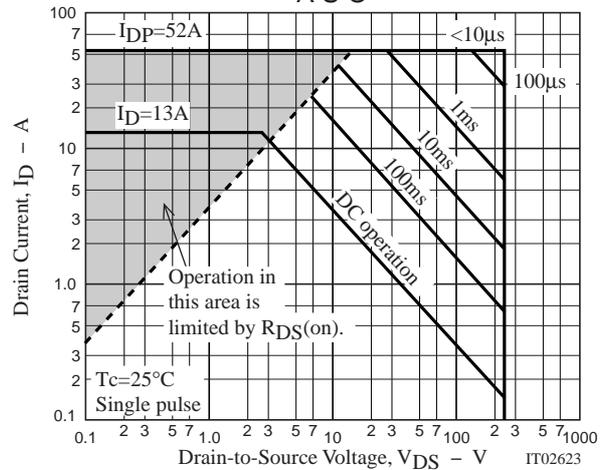
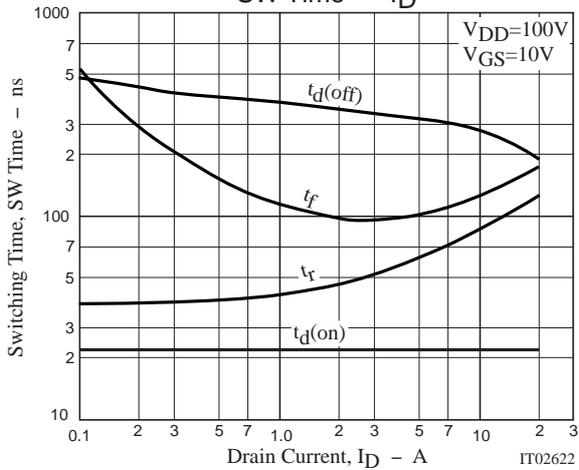
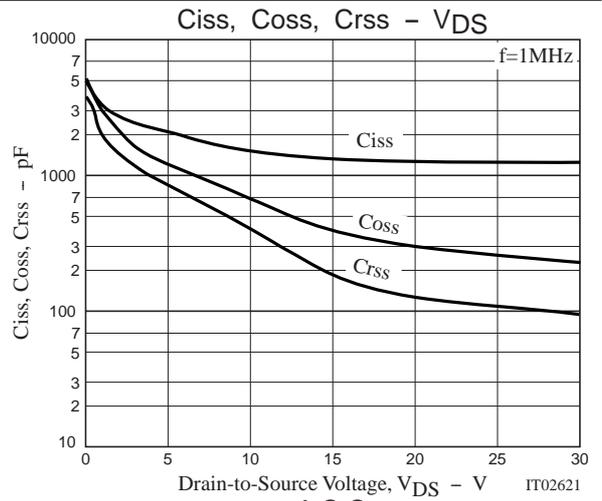
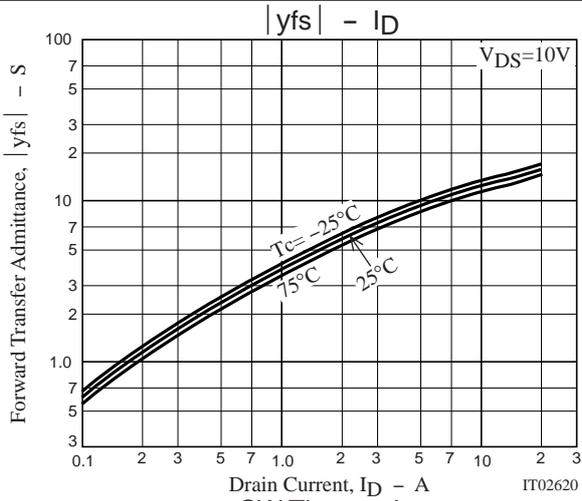
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=6A$	6	10		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=6A, V_{GS}=10V$		200	270	$m\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		1290		pF
Output Capacitance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



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