



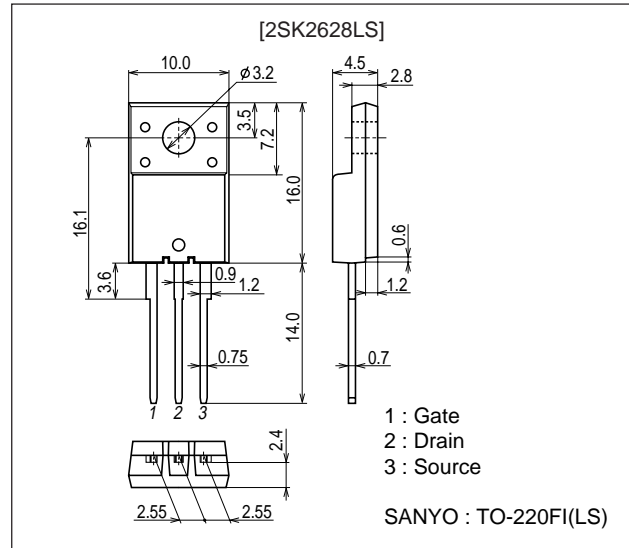
**Ultrahigh-Speed Switching Applications**

**Features**

- Low ON-resistance.
- Low Qg.

**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>		600	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±30	V
Drain Current (DC)	I <sub>D</sub>		6	A
Drain Current (Pulse)	I <sub>DP</sub>		24	A
Allowable Power Dissipation	P <sub>D</sub>		2.0	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	600			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =600V, V <sub>GS</sub> =0			1.0	mA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±30V, V <sub>DS</sub> =0			±100	nA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	3.5		5.5	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =4A	2.0	4.0		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> =2A, V <sub>GS</sub> =15V		0.9	1.1	Ω

Marking : K2628

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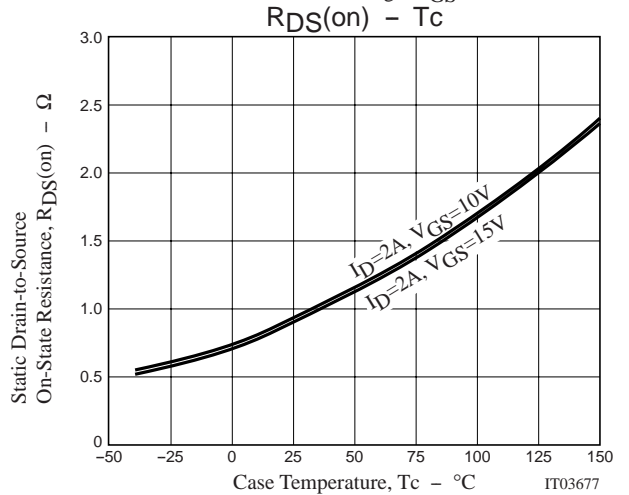
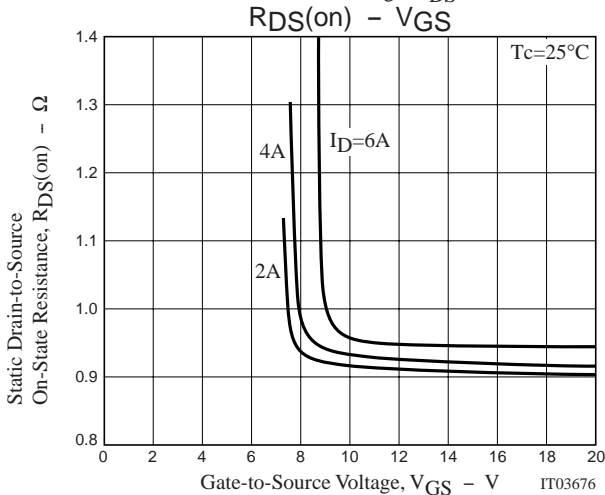
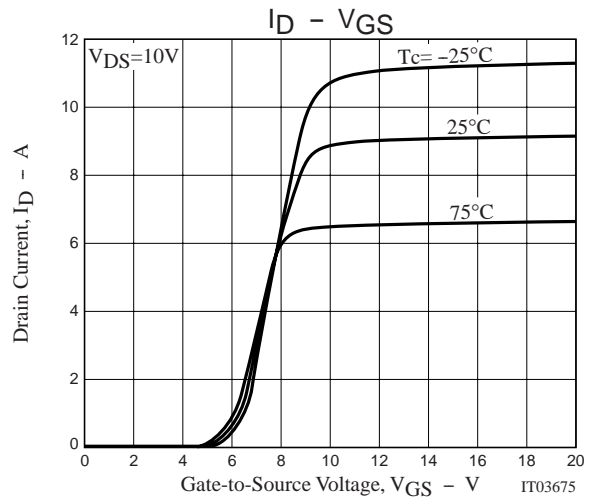
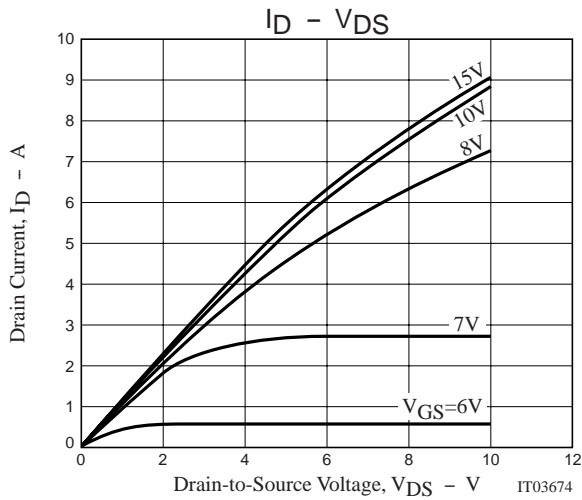
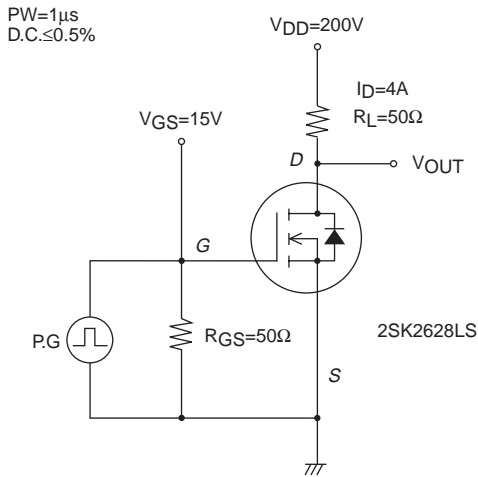
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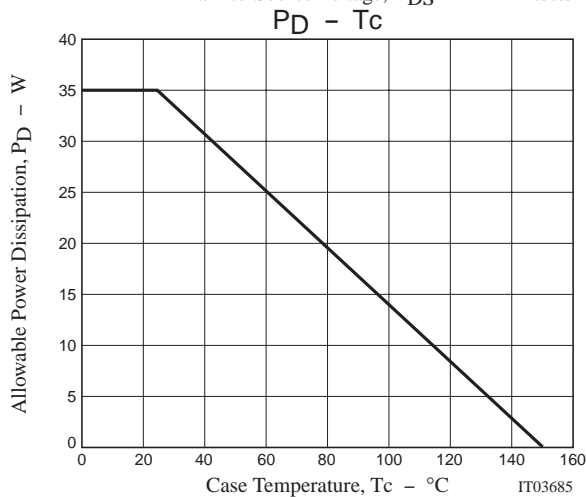
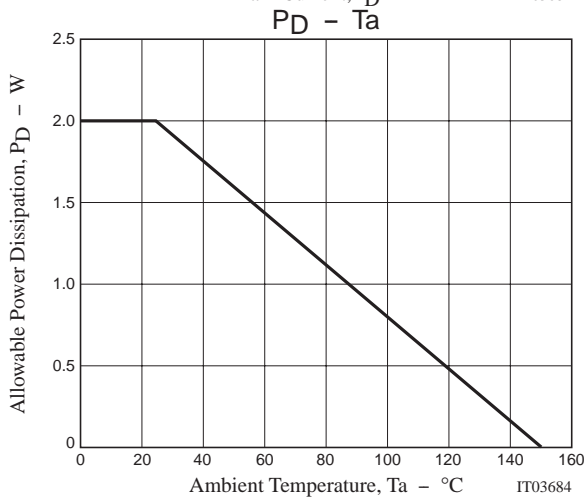
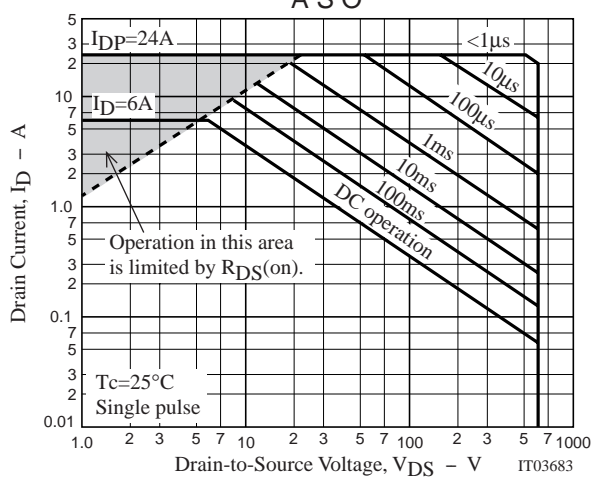
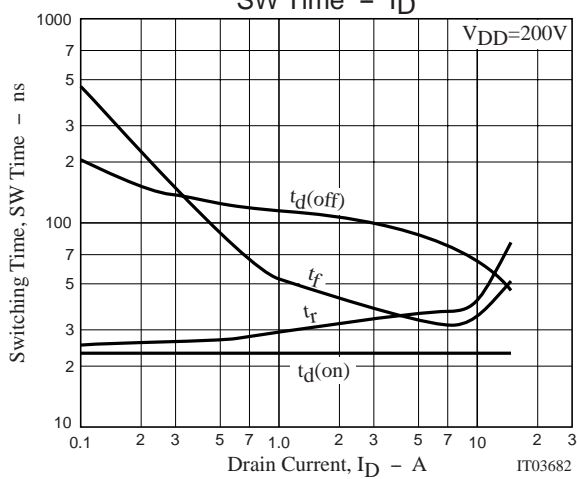
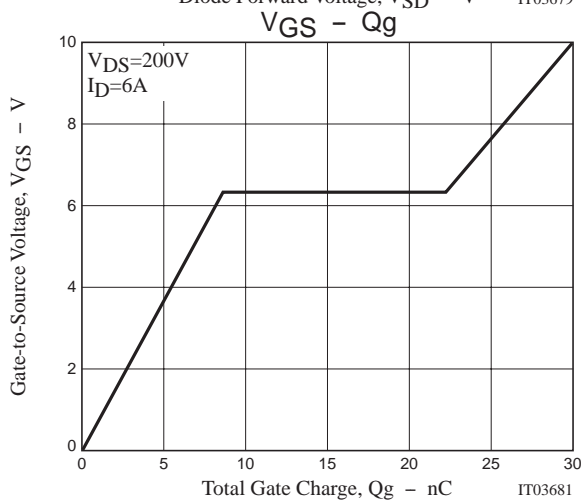
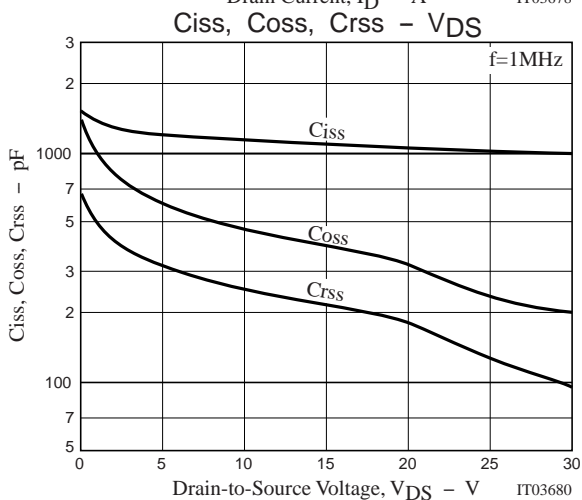
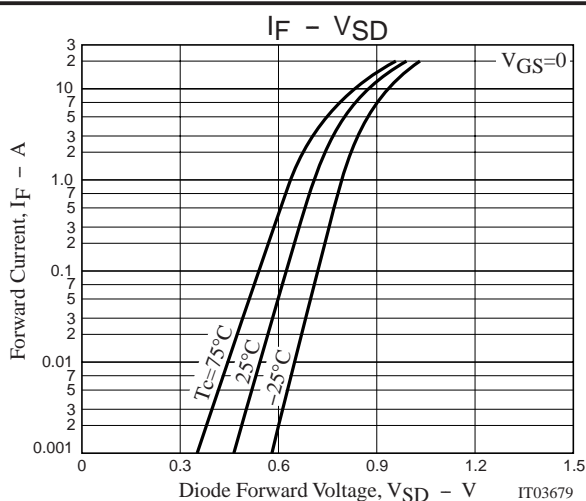
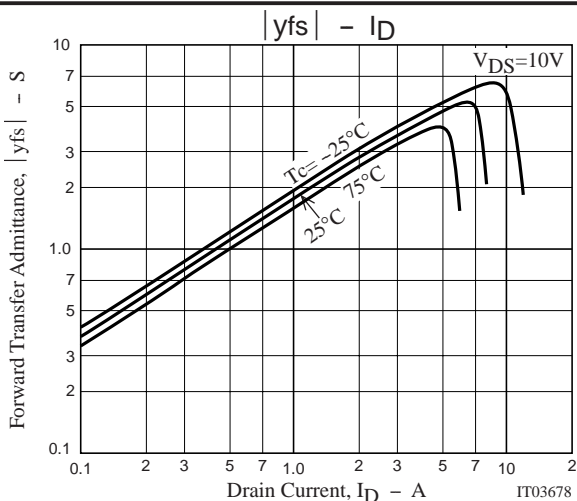
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V <sub>DS</sub> =20V, f=1MHz		1050		pF
Output Capacitance	Coss	V <sub>DS</sub> =20V, f=1MHz		320		pF
Reverse Transfer Capacitance	Crss	V <sub>DS</sub> =20V, f=1MHz		180		pF
Total Gate Charge	Qg	V <sub>DS</sub> =200V, V <sub>GS</sub> =10V, I <sub>D</sub> =6A		30		nC
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		23		ns
Rise Time	t <sub>r</sub>	See specified Test Circuit.		35		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	See specified Test Circuit.		90		ns
Fall Time	t <sub>f</sub>	See specified Test Circuit.		35		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =6A, V <sub>GS</sub> =0		0.85	1.2	V

## Switching Time Test Circuit



# 2SK2628LS



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