



SANYO Semiconductors

DATA SHEET

2SK2628ALS — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Low Qg.
- Ultrahigh-speed switching.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		600	V
Gate-to-Source Voltage	VGSS		±30	V
Drain Current (DC)	IDC*1	Limited only by maximum temperature	7	A
	IDPACK*2	SANYO's ideal heat dissipation condition	6.2	A
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	24	A
Allowable Power Dissipation	PD		2.0	W
		Tc=25°C (SANYO's ideal heat dissipation condition)	35	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C
Avalanche Energy (Single Pulse) *3	EAS		98	mJ
Avalanche Current *4	I _{AV}		6	A

*1 Shows chip capability

*2 Package limited

*3 VDD=50V, L=5mH, IAV=6A

*4 L≤5mH, single pulse

Marking : K2628

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2SK2628ALS

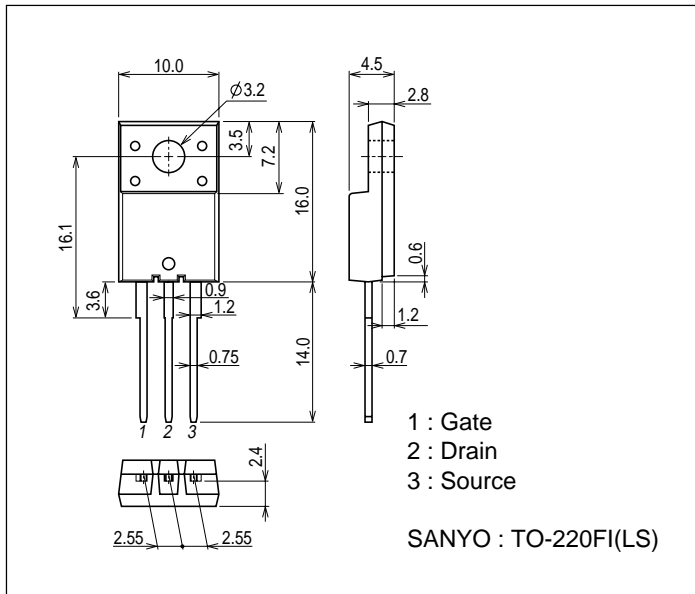
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0V$	600			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V, V_{GS}=0V$			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 30V, V_{DS}=0V$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	3.5		5.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=4A$	2.0	4.0		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=2A, V_{GS}=15V$		0.9	1.1	Ω
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		1050		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		320		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		180		pF
Total Gate Charge	Q_g	$V_{DS}=200V, V_{GS}=10V, I_D=6A$		30		nC
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		23		ns
Rise Time	t_r	See specified Test Circuit.		35		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		90		ns
Fall Time	t_f	See specified Test Circuit.		35		ns
Diode Forward Voltage	V_{SD}	$I_S=6A, V_{GS}=0V$		0.85	1.2	V

Package Dimensions

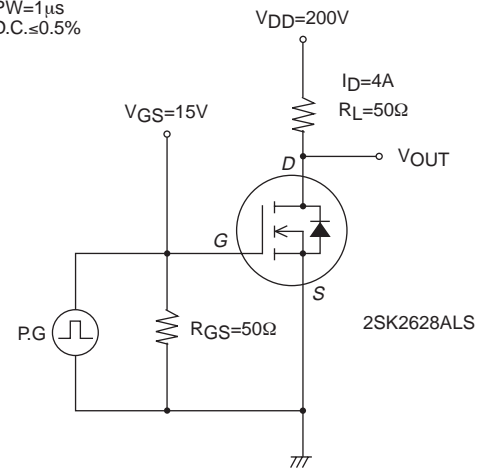
unit : mm (typ)

7509-002

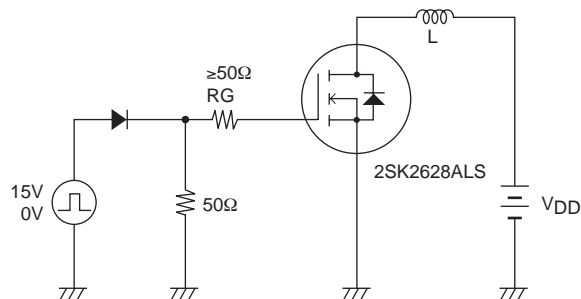


Switching Time Test Circuit

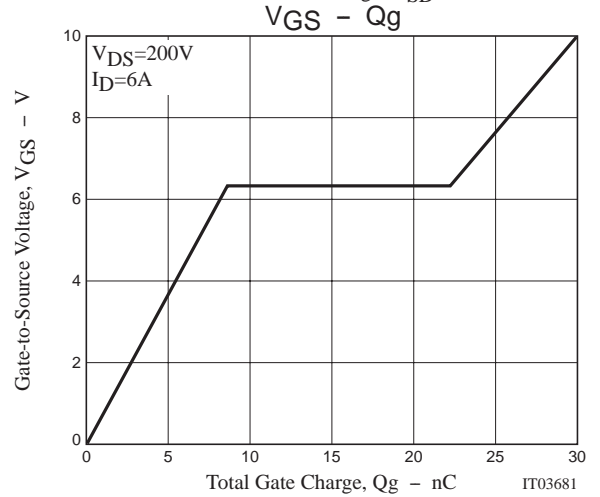
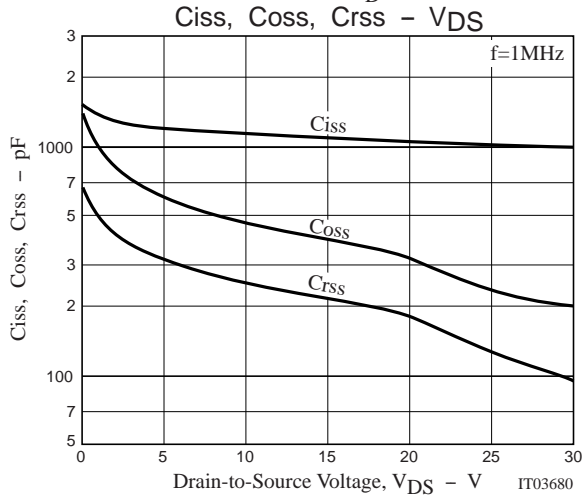
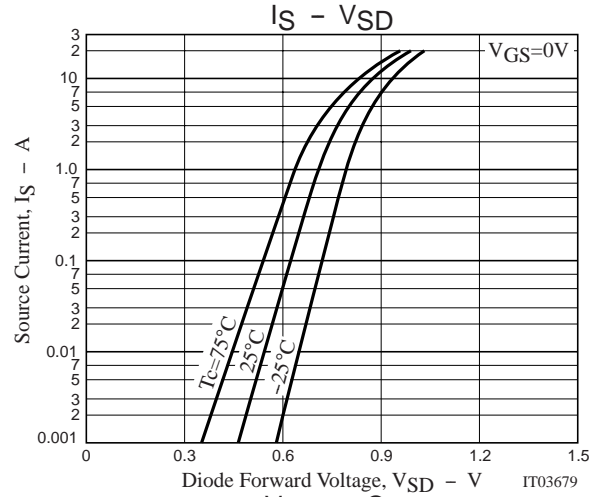
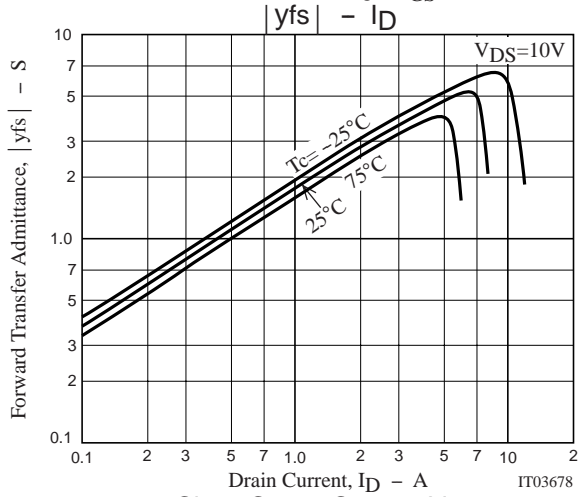
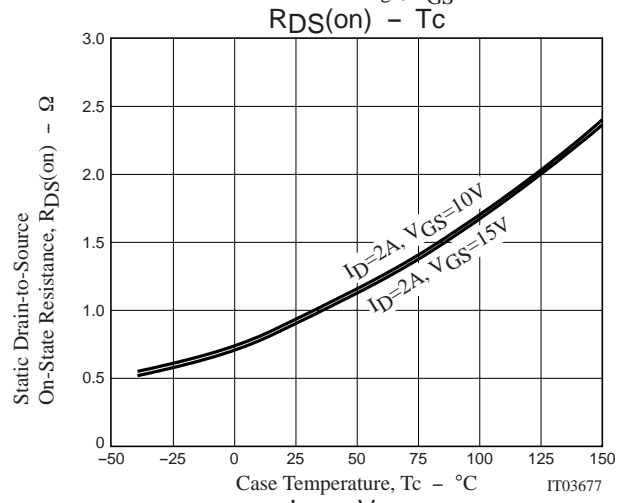
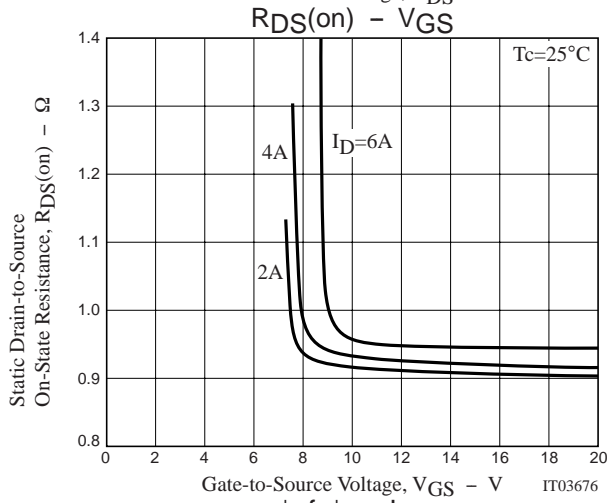
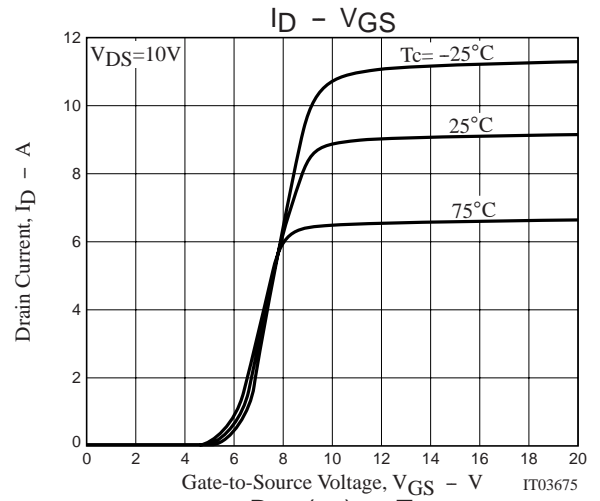
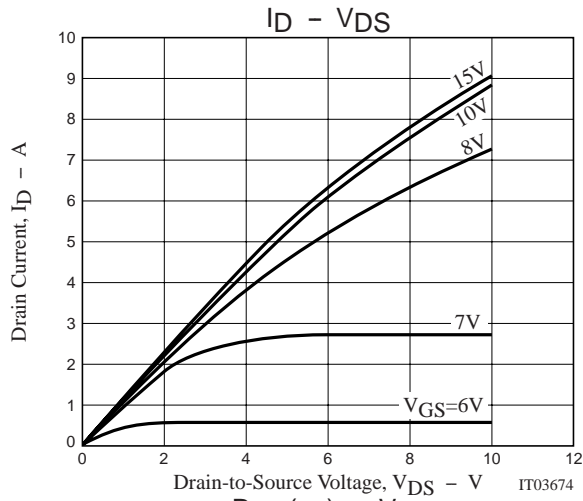
PW=1 μ s
D.C. \leq 0.5%



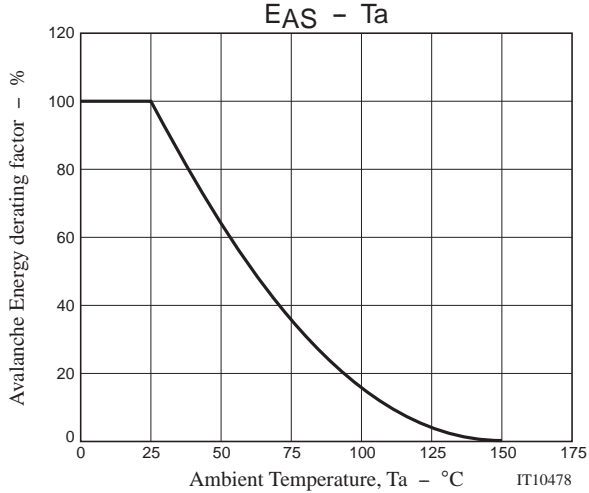
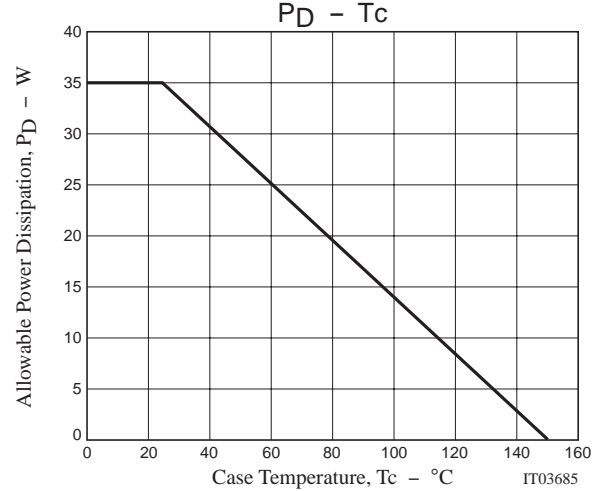
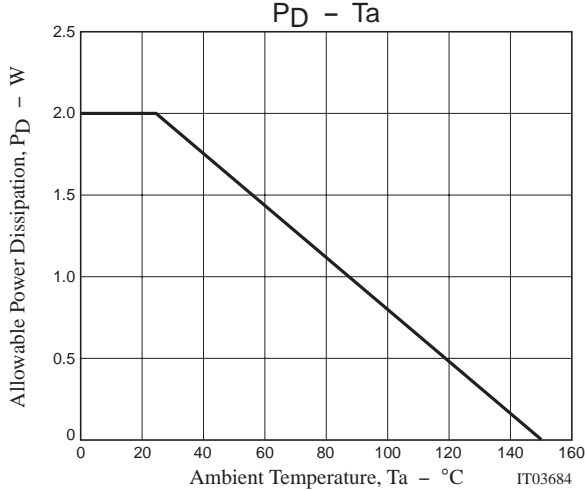
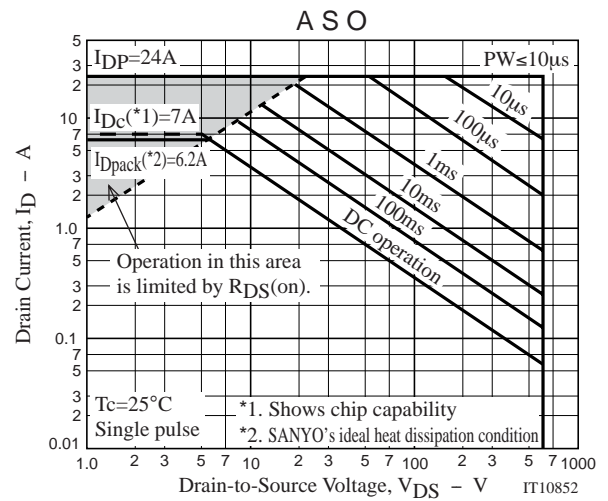
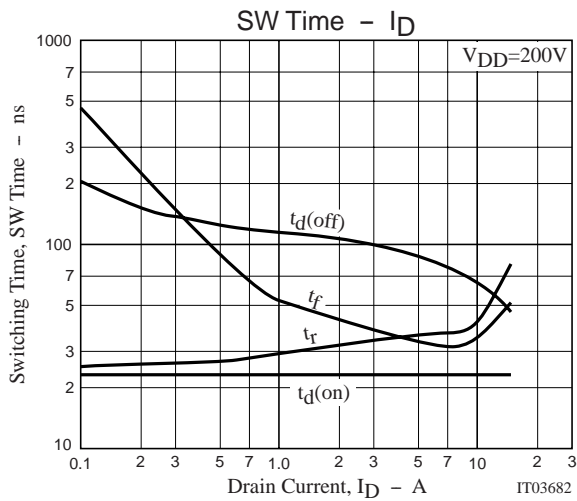
Avalanche Resistance Test Circuit



2SK2628ALS



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Note on usage : Since the 2SK2628ALS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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