



# 2SK2625ALS — 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	V <sub>DSS</sub>		600	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±30	V
Drain Current (DC)	I <sub>DC</sub> *1	Limited only by maximum temperature	5	A
	I <sub>Dpack</sub> *2	SANYO's ideal heat dissipation condition	4.4	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	16	A
Allowable Power Dissipation	P <sub>D</sub>		2.0	W
		Tc=25°C (SANYO's ideal heat dissipation condition)	30	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C
Avalanche Energy (Single Pulse) *3	E <sub>AS</sub>		87	mJ
Avalanche Current *4	I <sub>AV</sub>		4	A

\*1 Shows chip capability

\*2 Package limited

\*3 V<sub>DD</sub>=50V, L=10mH, I<sub>AV</sub>=4A

\*4 L≤10mH, single pulse

Marking : K2625

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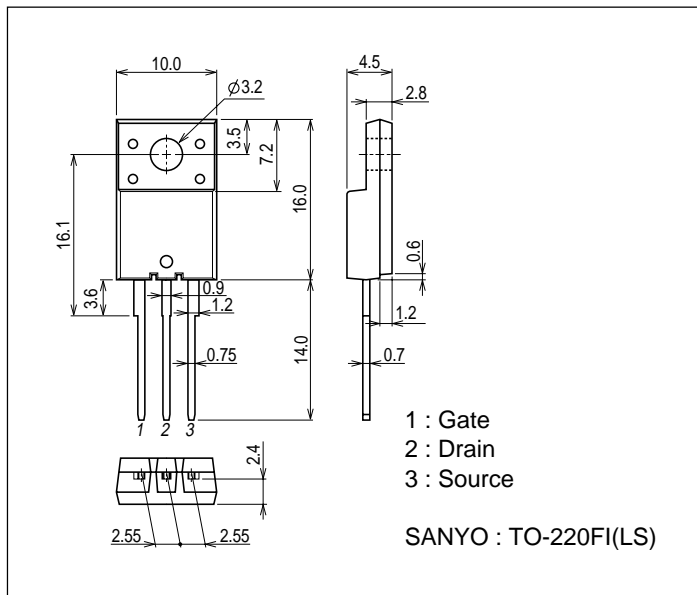
# 2SK2625ALS

## Electrical Characteristics at Ta=25°C

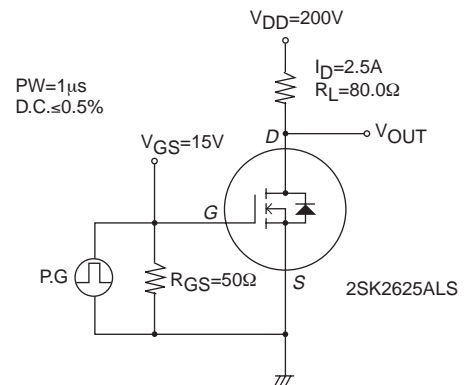
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0V$	600			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=600V, V_{GS}=0V$			1.0	mA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 30V, V_{DS}=0V$			$\pm 100$	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	3.5		5.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=2.5A$	1.5	3.0		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=2.5A, V_{GS}=15V$		1.5	2.0	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		700		pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$		220		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$		110		pF
Total Gate Charge	$Q_g$	$V_{DS}=200V, I_D=5A, V_{GS}=10V$			20	nC
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		20		ns
Rise Time	$t_r$	See specified Test Circuit.		20		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		50		ns
Fall Time	$t_f$	See specified Test Circuit.		25		ns
Diode Forward Voltage	$V_{SD}$	$I_S=5A, V_{GS}=0V$		0.88	1.2	V

## Package Dimensions

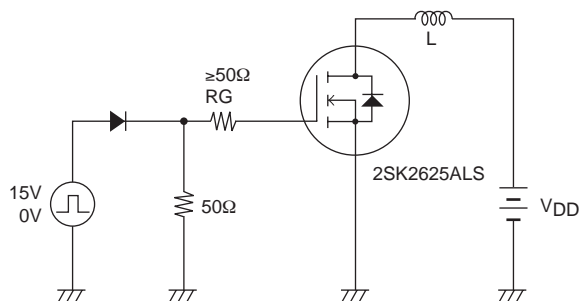
unit : mm (typ)  
7509-002



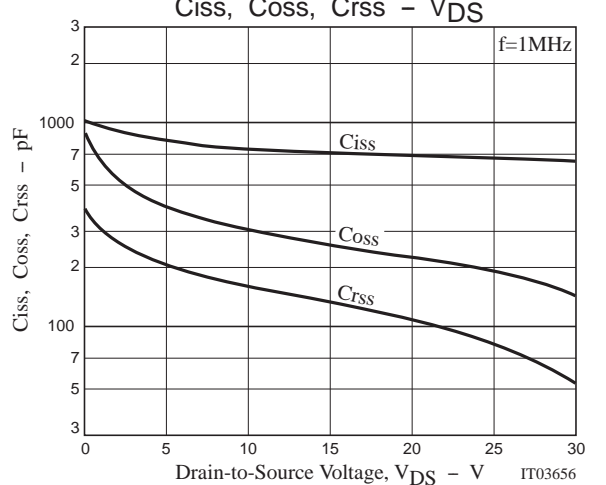
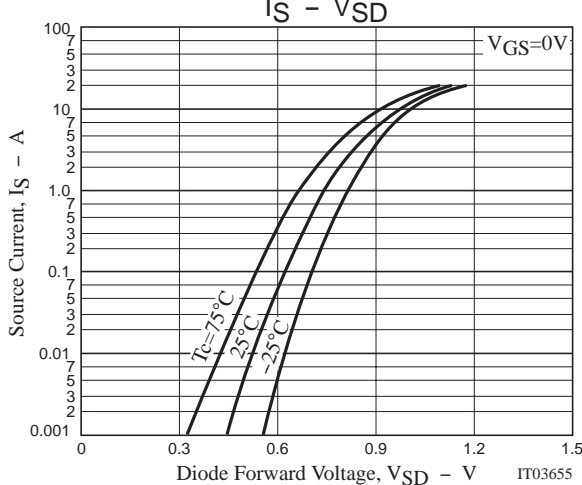
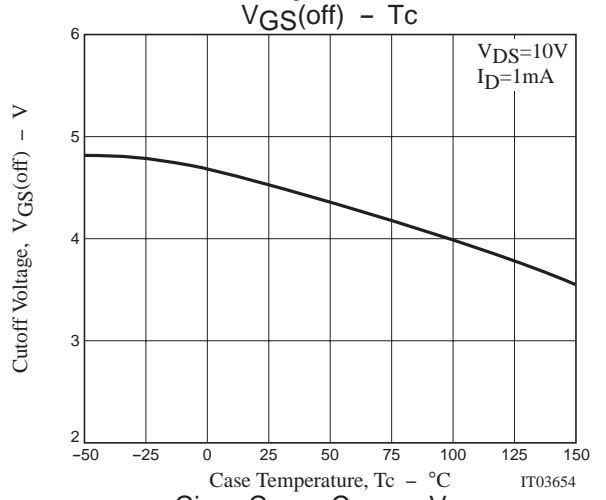
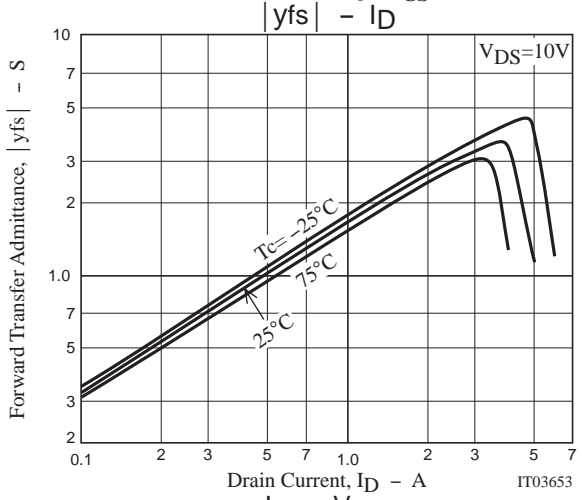
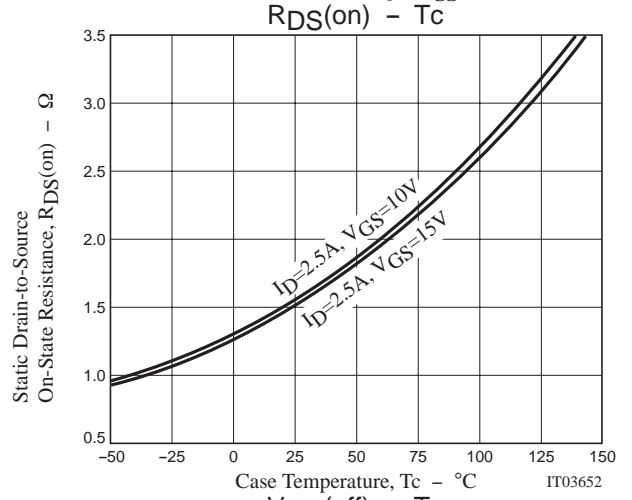
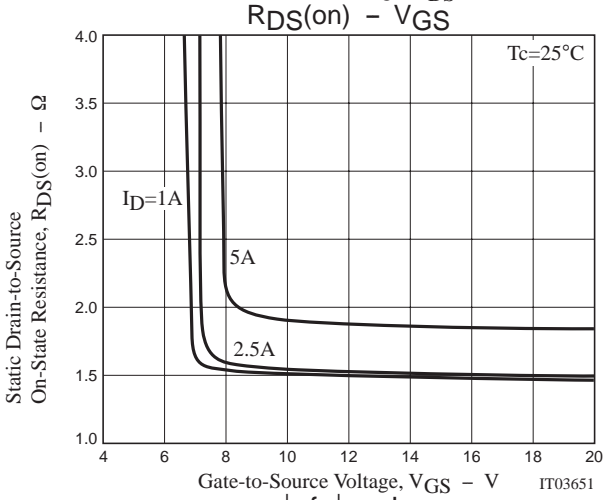
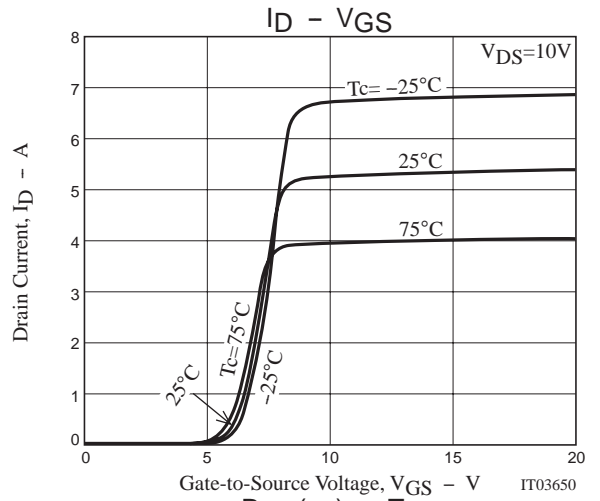
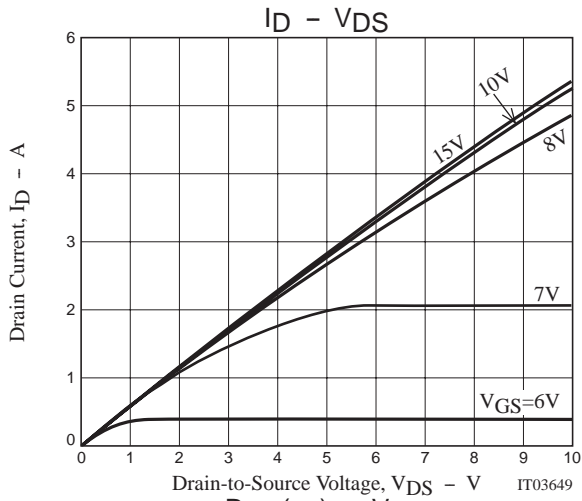
## Switching Time Test Circuit



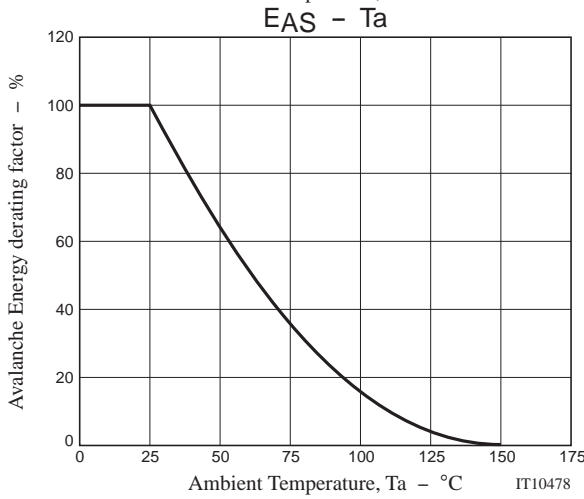
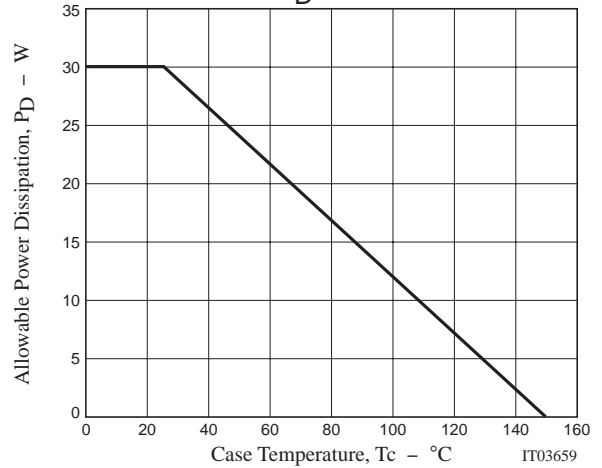
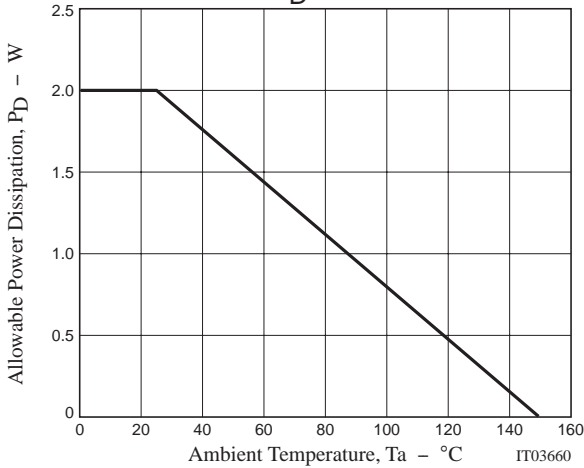
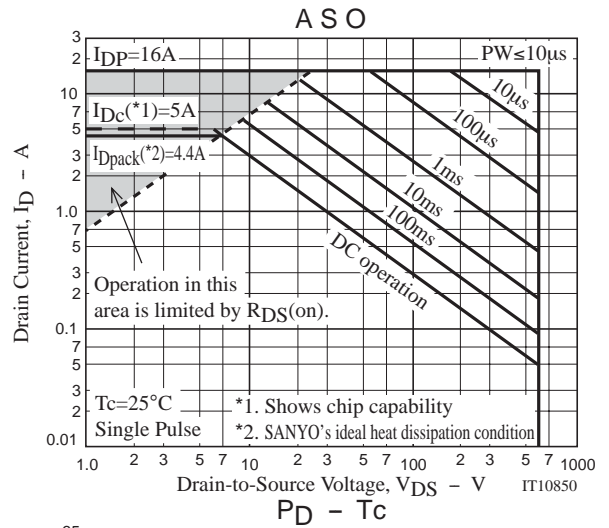
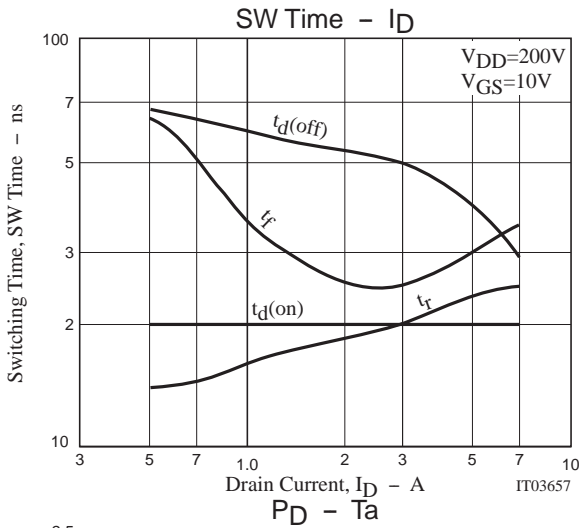
## Avalanche Resistance Test Circuit



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Note on usage : Since the 2SK2625ALS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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