



SANYO Semiconductors

## DATA SHEET

# 2SK2683LS

N-Channel Silicon MOSFET

## General-Purpose Switching Device

### Applications

#### Features

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

#### Specifications

**Absolute Maximum Ratings** at  $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		250	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 30$	V
Drain Current (DC)	$I_D$		16	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu\text{s}$ , duty cycle $\leq 1\%$	64	A
Allowable Power Dissipation	$P_D$	$T_c=25^\circ\text{C}$	40	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	$V_{(BR)DSS}$	$I_D=1\text{mA}$ , $V_{GS}=0\text{V}$	250			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}$ , $V_{DS}=0\text{V}$	$\pm 30$			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=250\text{V}$ , $V_{GS}=0\text{V}$			1.0	mA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 25\text{V}$ , $V_{DS}=0\text{V}$			$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$	2.0		3.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$ , $I_D=8\text{A}$	8.5	14		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=8\text{A}$ , $V_{GS}=10\text{V}$		130	180	$\text{m}\Omega$

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# 2SK2683LS

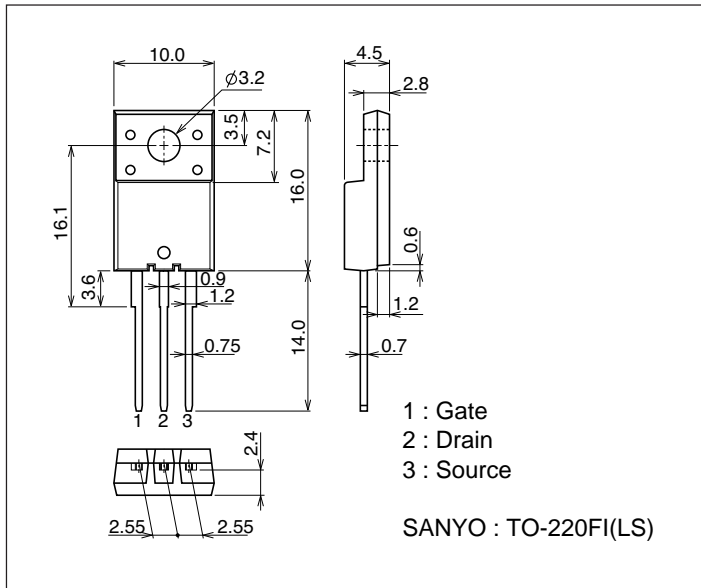
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=20V, f=1MHz$		1950		pF
Output Capacitance	Coss	$V_{DS}=20V, f=1MHz$		455		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=20V, f=1MHz$		185		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		28		ns
Rise Time	$t_r$	See specified Test Circuit.		96		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		500		ns
Fall Time	$t_f$	See specified Test Circuit.		150		ns
Diode Forward Voltage	$V_{SD}$	$I_S=16A, V_{GS}=0V$		1.0	1.5	V
Diode Reverse Recovery Time	$t_{rr}$	$I_S=16A, di/dt=100A/\mu$		180		ns

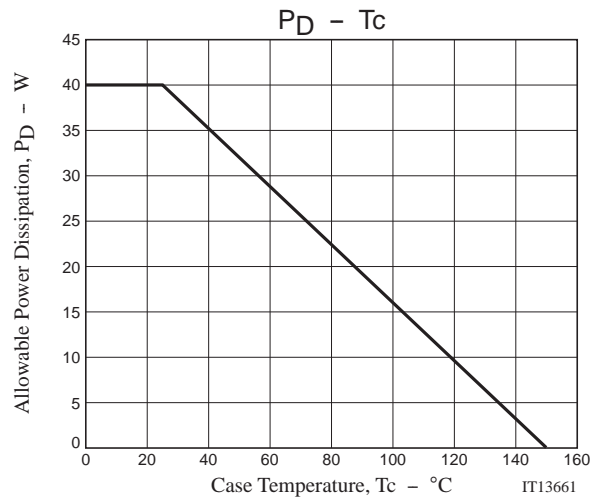
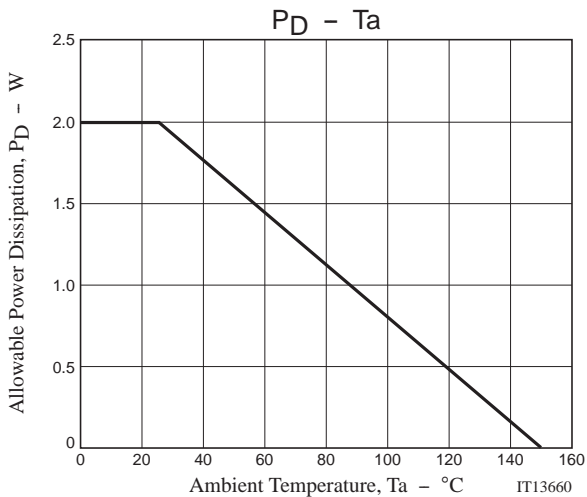
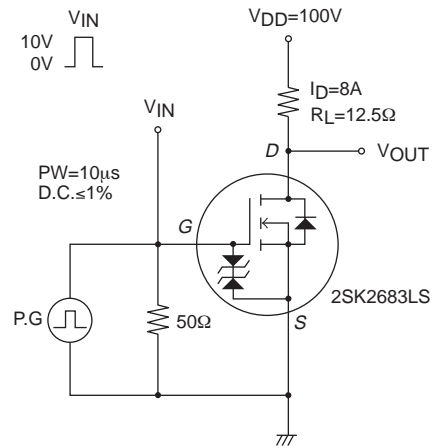
## Package Dimensions

unit : mm (typ)

7509-002



## Switching Time Test Circuit



Note on usage : Since the 2SK2683LS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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