Ordering number : EN8624

SANYO Semiconductors

DATA SHEET

N-Channel Silicon MOSFET

2SK3095LS — General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Low Qg.
- Ultrahigh-Speed Switching Applications.
- Avalanche resistance guarantee.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		400	V
Gate-to-Source Voltage	V_{GSS}		±30	V
Drain Current (DC)	I_D		5	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	20	A
Allowable Power Dissipation	P_D		2.0	W
		Tc=25°C	25	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C
Avalanche Enargy (Single Pulse) *1	E_{AS}		71.4	mJ
Avalanche Current *2	I_{AV}		5	A

*1 V_{DD}=50V, L=5mH, I_{AV}=5A

*2 L≤5mH, single pulse

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	400			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=320V, V_{GS}=0V			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}= ±30V, V_{DS}=0V			±100	nA
Cutoff Voltage	V_{GS}(off)	V_{DS}=10V, I_D=1mA	3.0		4.0	V
Forward Transfer Admittance	|yfs|	V_{DS}=10V, I_D=2.8A	1.4	2.8		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)	I_D=2.8A, V_{GS}=15V		0.92	1.2	Ω

Marking : K3095

Continued on next page.

SANYO Semiconductor Co., Ltd.

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Continued from preceding page.

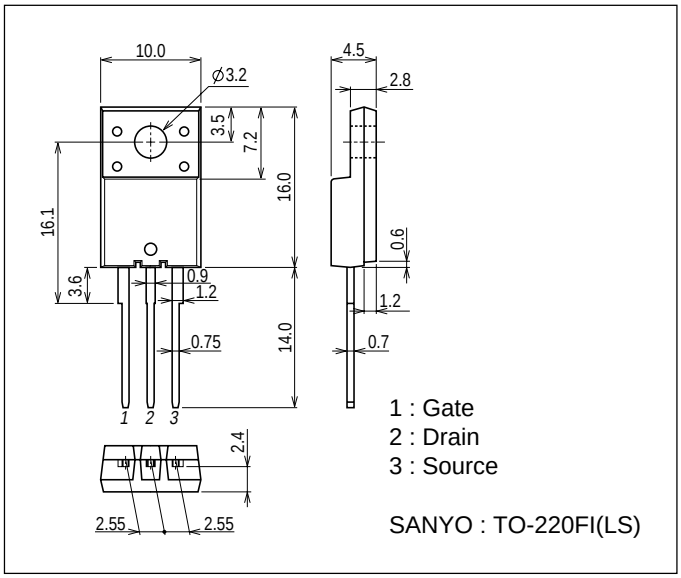
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		660		pF
Output Capacitance	Coss	V_{DS}=20V, f=1MHz		170		pF
Reverse Transfer Capacitance	Crss	V_{DS}=20V, f=1MHz		80		pF
Turn-ON Delay Time	t_{d}(on)	See specified Test Circuit.		14		ns
Rise Time	t_{r}	See specified Test Circuit.		15		ns
Turn-OFF Delay Time	t_{d}(off)	See specified Test Circuit.		45		ns
Fall Time	t_{f}	See specified Test Circuit.		25		ns
Total Gate Charge	Qg	V_{DS}=200V, V_{GS}=10V, I_{D}=5A		20		nC
Diode Forward Voltage	V_{SD}	I_{S}=5A, V_{GS}=0V		0.9	1.2	V

Note : Be careful in handling the 2SK3095LS because it has no protection diode between gate and source.

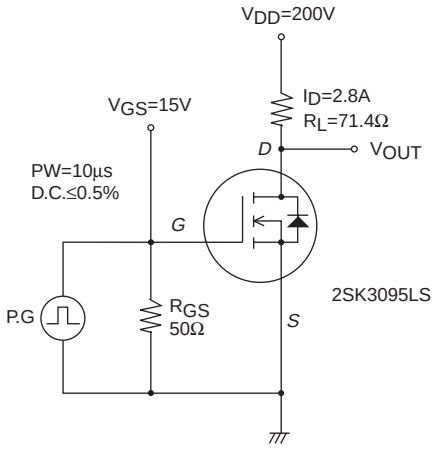
Package Dimensions

unit : mm (typ)

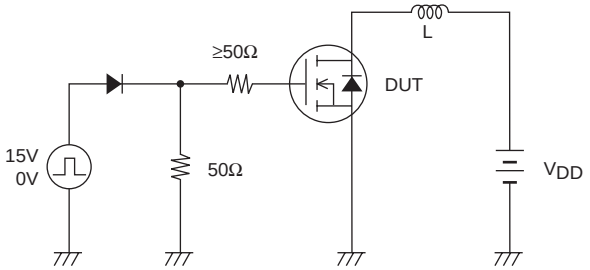
7509-002

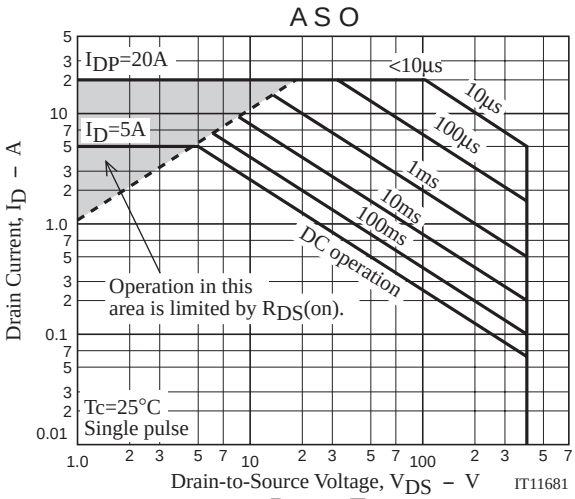


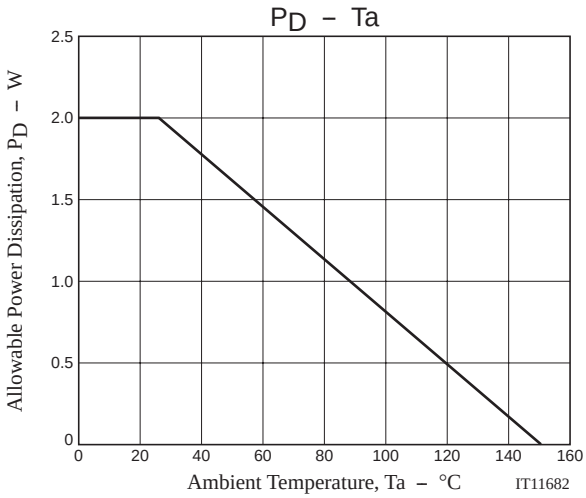
Switching Time Test Circuit

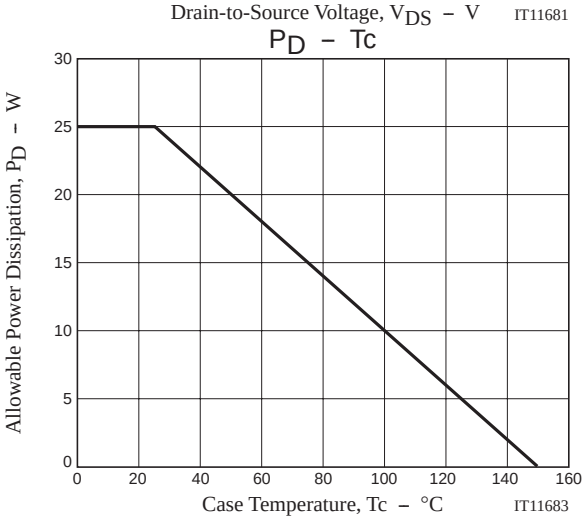


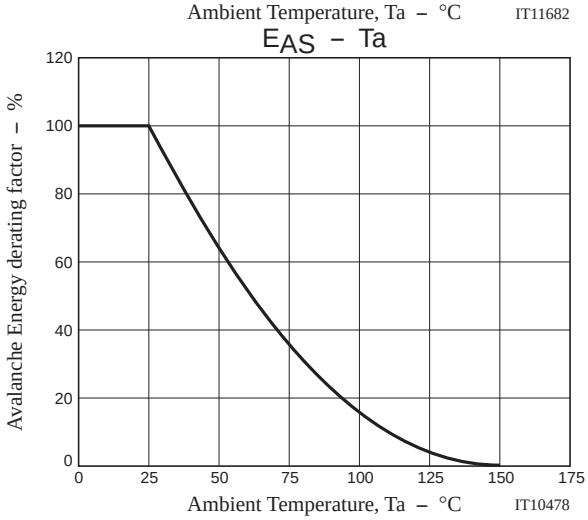
Avalanche Resistance Test Circuit











Note on usage : Since the 2SK3095LS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.