



SANYO Semiconductors

DATA SHEET

2SK3095LS — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

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

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		400	V
Gate-to-Source Voltage	V_{GS}		± 30	V
Drain Current (DC)	I_D		5	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	20	A
Allowable Power Dissipation	P_D		2.0	W
		$T_c=25^\circ\text{C}$	25	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$
Avalanche Energy (Single Pulse) *1	E_{AS}		71.4	mJ
Avalanche Current *2	I_{AV}		5	A

*1 $V_{DD}=50\text{V}$, $L=5\text{mH}$, $I_{AV}=5\text{A}$ *2 $L \leq 5\text{mH}$, single pulseElectrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0\text{V}$	400			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=320\text{V}$, $V_{GS}=0\text{V}$			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 30\text{V}$, $V_{DS}=0\text{V}$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	3.0		4.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $I_D=2.8\text{A}$	1.4	2.8		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=2.8\text{A}$, $V_{GS}=15\text{V}$		0.92	1.2	Ω

Marking : K3095

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2SK3095LS

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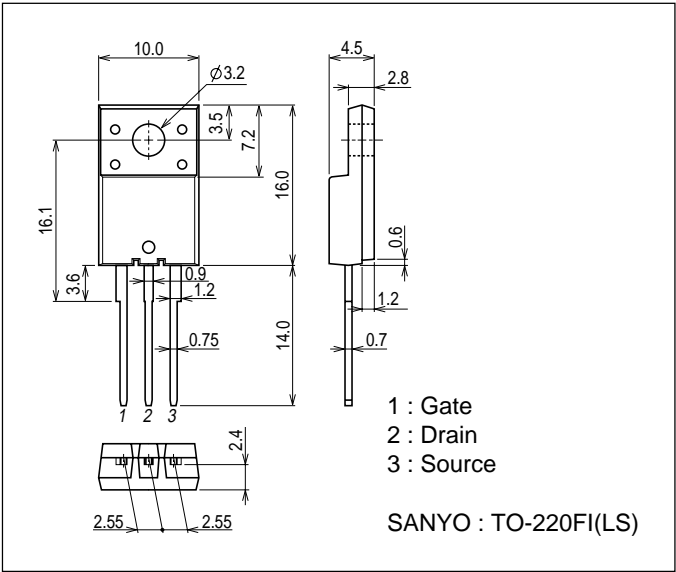
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=20V, f=1MHz$		660		pF
Output Capacitance	Coss	$V_{DS}=20V, f=1MHz$		170		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=20V, f=1MHz$		80		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		14		ns
Rise 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	VSD	$I_S=5A, V_{GS}=0V$		0.9	1.2	V

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

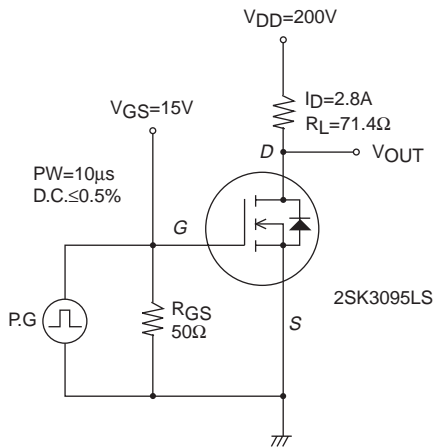
Package Dimensions

unit : mm (typ)

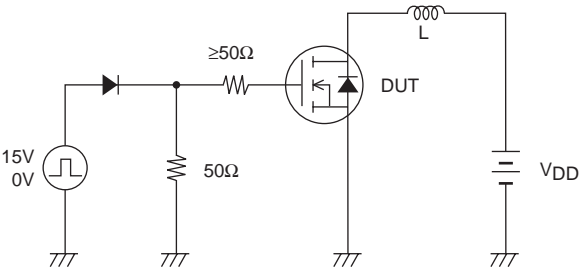
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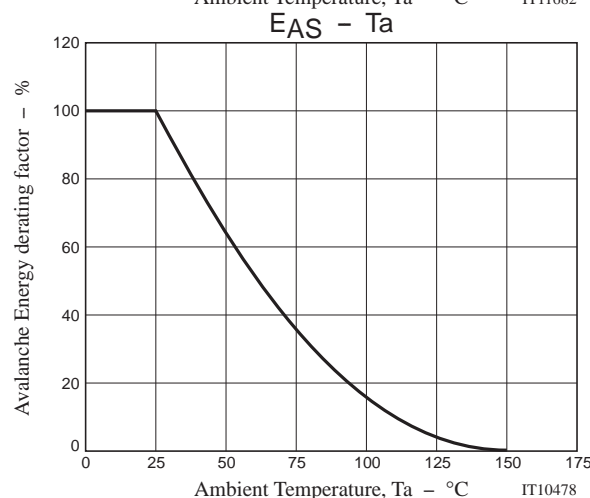
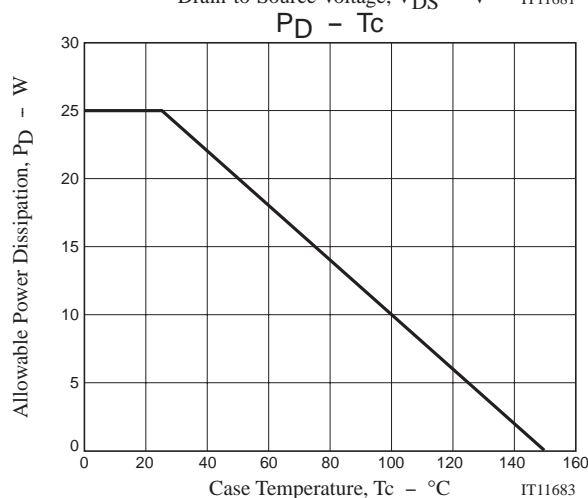
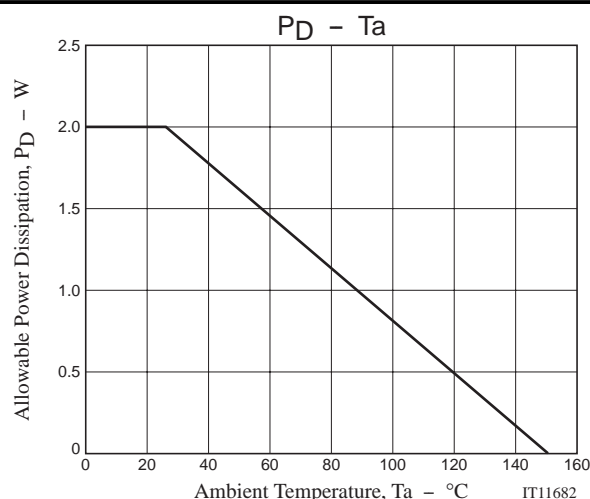
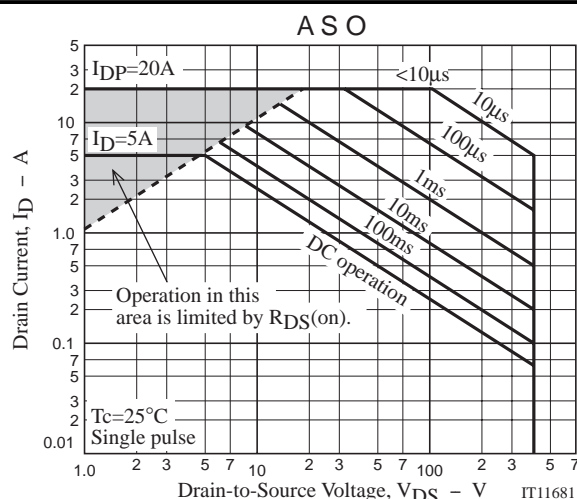


Switching Time Test Circuit



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.

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