



SANYO Semiconductors
DATA SHEET

N-Channel Silicon MOSFET
2SK4073LS — General-Purpose Switching Device
Applications

Features

- Ultralow ON-resistance.
- Load switching applications.
- Avalanche resistance guarantee.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings		Unit
Drain-to-Source Voltage	V _{DSS}			60	V
Gate-to-Source Voltage	V _{GSS}			±20	V
Drain Current (DC)	I _D			90	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%		360	A
Allowable Power Dissipation	P _D			2.0	W
		T _c =25°C		40	W
Channel Temperature	T _{ch}			150	°C
Storage Temperature	T _{stg}			-55 to +150	°C
Avalanche Energy (Single Pulse) *1	E _{AS}			850	mJ
Avalanche Current *2	I _{AV}			70	A

Note : *1 V_{DD}=30V, L=200μH, I_{AV}=70A

*2 L≤200μH, 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	60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _D =60V, V _{GS} =0V			1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _D =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _D =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	y _{fs}	V _D =10V, I _D =45A	44	74		S
Static Drain-to-Source On-State Resistance	R _{D(on)1}	I _D =45A, V _{GS} =10V		3.8	5.0	mΩ
	R _{D(on)2}	I _D =45A, V _{GS} =4V		5.0	7.0	mΩ

Marking : K4073

Continued on next page.

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2SK4073LS

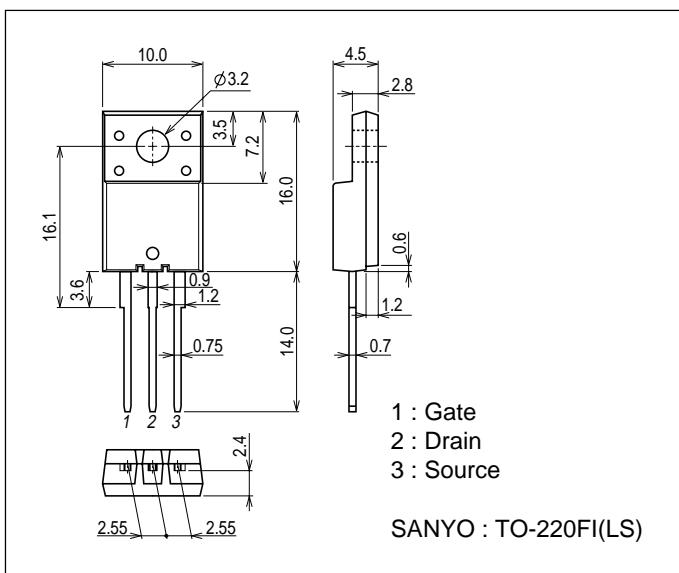
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		12500		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		1200		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		950		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		80		ns
Rise Time	t_r	See specified Test Circuit.		630		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		860		ns
Fall Time	t_f	See specified Test Circuit.		750		ns
Total Gate Charge	Q_g	$V_{DS}=30V, V_{GS}=10V, I_D=90A$		220		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=30V, V_{GS}=10V, I_D=90A$		30		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=30V, V_{GS}=10V, I_D=90A$		55		nC
Diode Forward Voltage	V_{SD}	$I_S=90A, V_{GS}=0V$		0.9	1.2	V

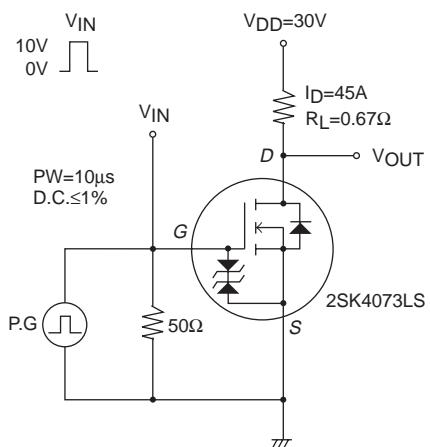
Package Dimensions

unit : mm (typ)

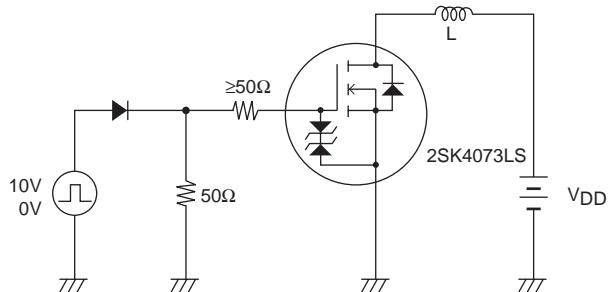
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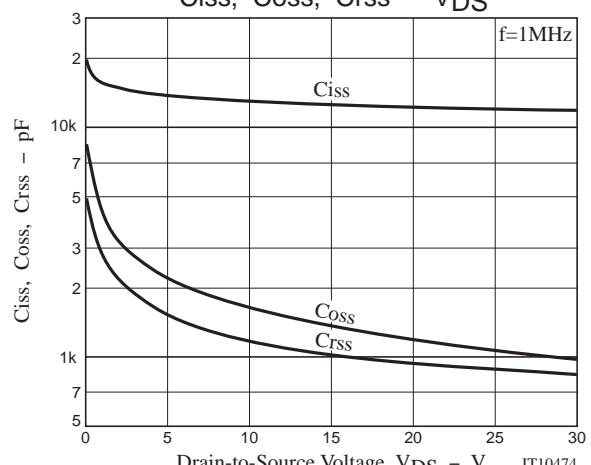
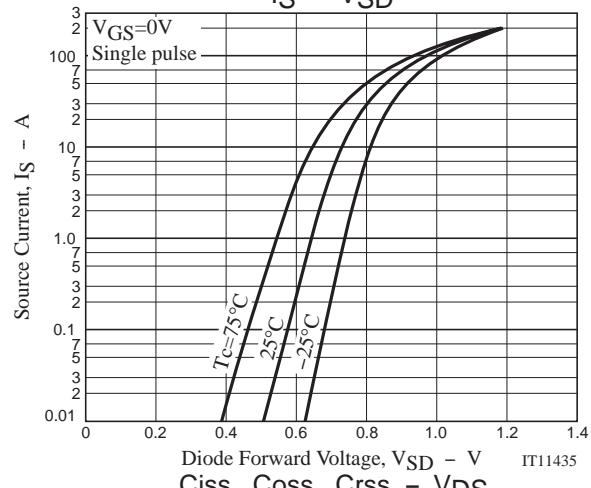
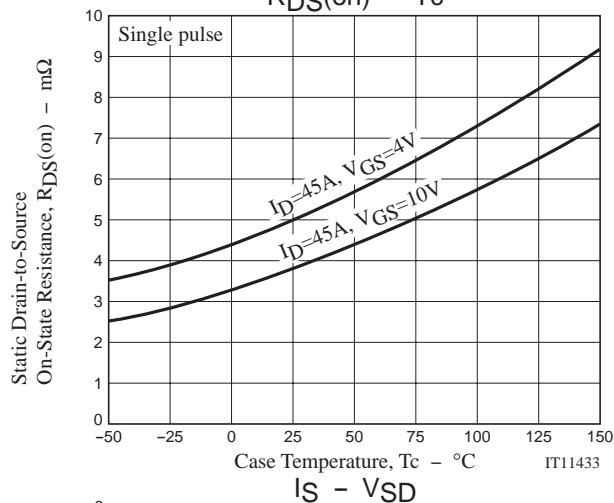
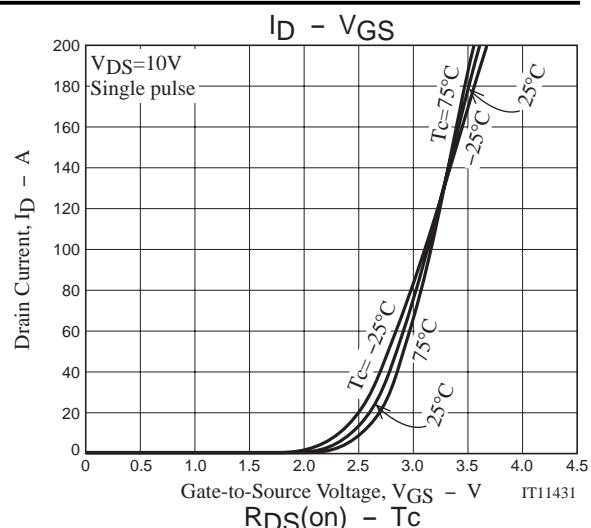
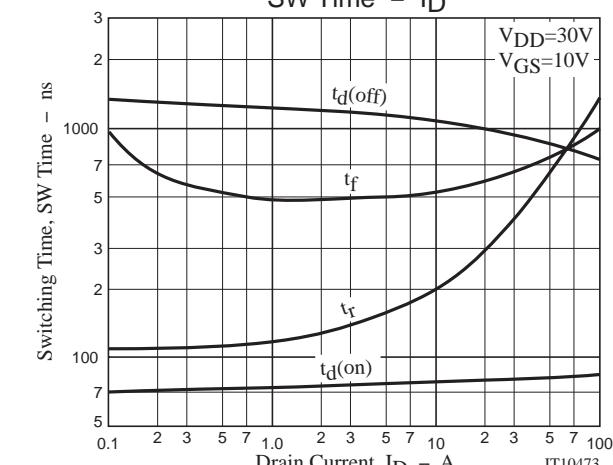
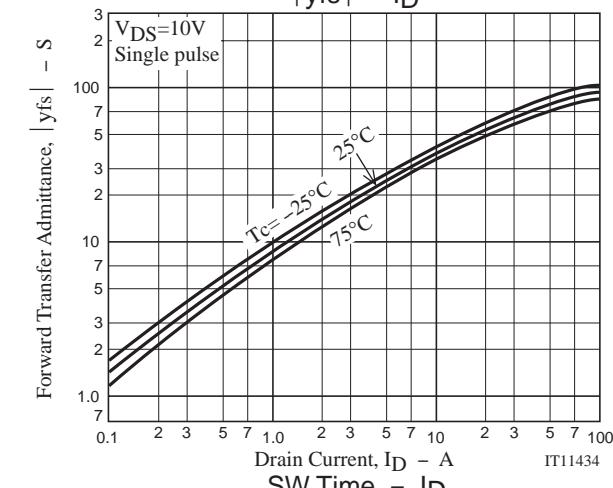
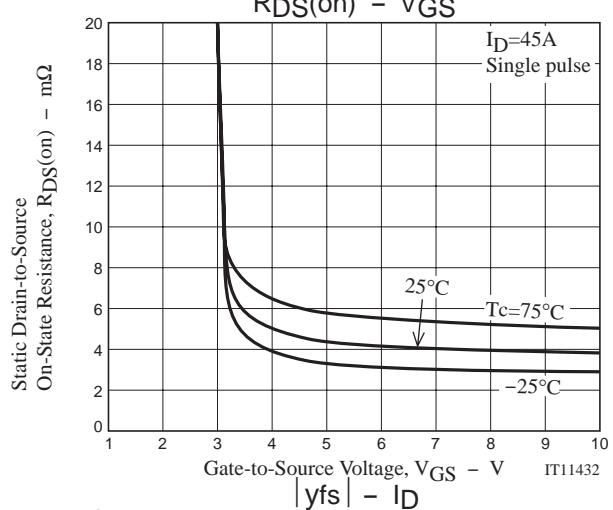
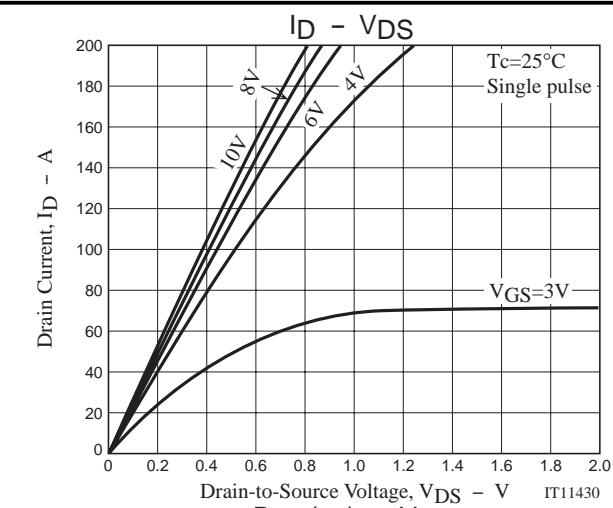
Switching Time Test Circuit



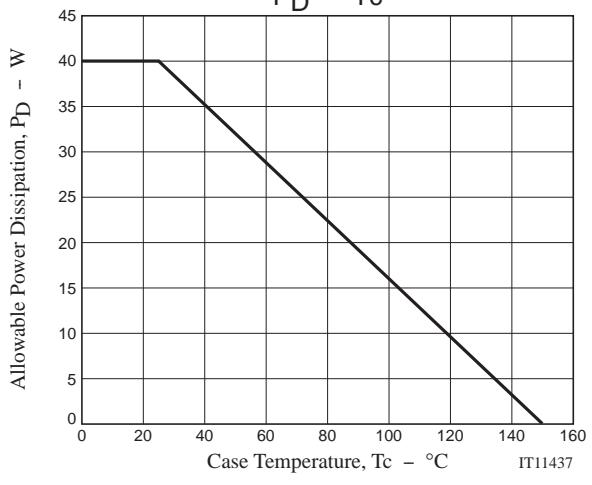
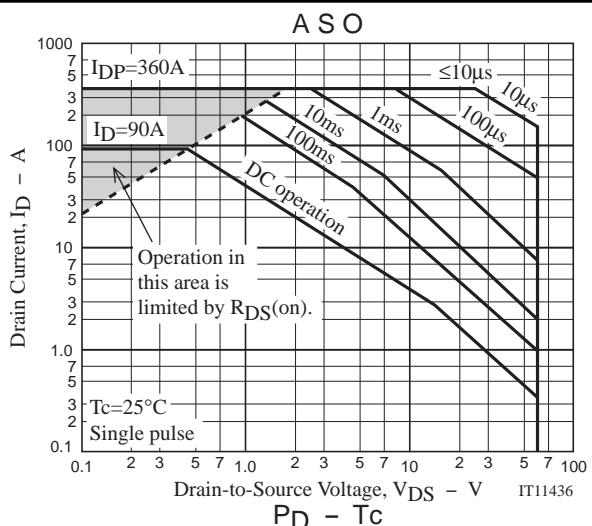
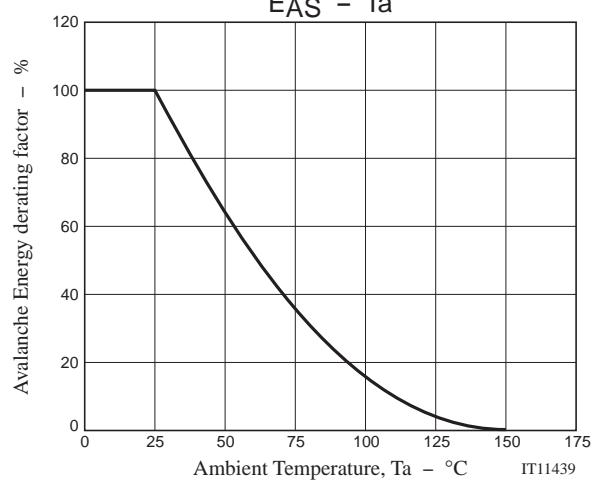
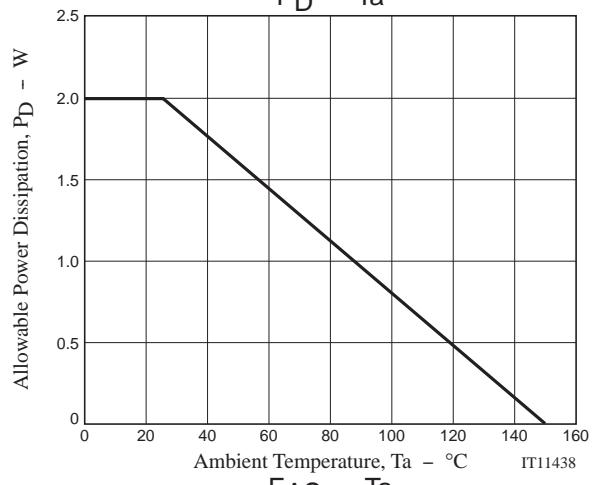
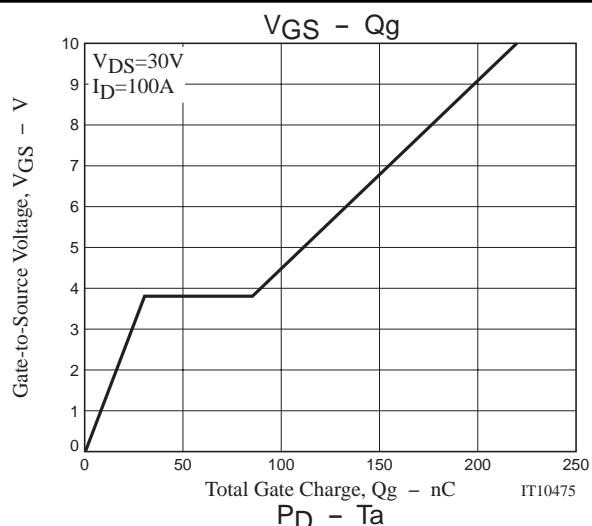
Avalanche Resistance Test Circuit



2SK4073LS



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Note on usage : Since the 2SK4073LS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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