

2SK1459LS — N-Channel Silicon MOSFET

— Ultrahigh-Speed Switching Applications

Features

- Low ON-resistance, ultrahigh-speed switching.
- Attachment workability is good by Mica-less package.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		900	V
Gate-to-Source Voltage	V _{GSS}		±30	V
Drain Current (DC)	I _D		2.5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	5	A
Allowable Power Dissipation	P _D		2.0	W
		T _c =25°C	30	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

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	900			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =900V, 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	2.0		3.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} =20V, I _D =1.5A	0.8	1.5		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =1.5A, V _{GS} =10V		4.7	6.0	Ω
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		350		pF
Output Capacitance	C _{oss}	V _{DS} =20V, f=1MHz		150		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =20V, f=1MHz		100		pF
Turn-ON Delay Time	t _{d(on)}	I _D =1.5A, V _{GS} =10V, V _{DD} =200V, R _{GS} =50Ω		15		ns
Rise Time	t _r	I _D =1.5A, V _{GS} =10V, V _{DD} =200V, R _{GS} =50Ω		25		ns
Turn-OFF Delay Time	t _{d(off)}	I _D =1.5A, V _{GS} =10V, V _{DD} =200V, R _{GS} =50Ω		120		ns
Fall Time	t _f	I _D =1.5A, V _{GS} =10V, V _{DD} =200V, R _{GS} =50Ω		40		ns
Diode Forward Voltage	V _{SD}	I _S =2.5A, V _{GS} =0V			1.8	V

(Note) Be careful in handling the 2SK1459LS because it has no protection diode between gate and source.

Marking : K1459

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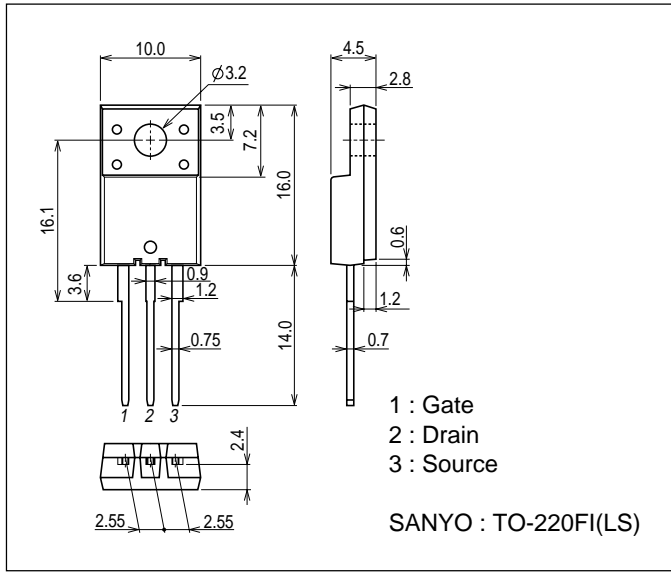
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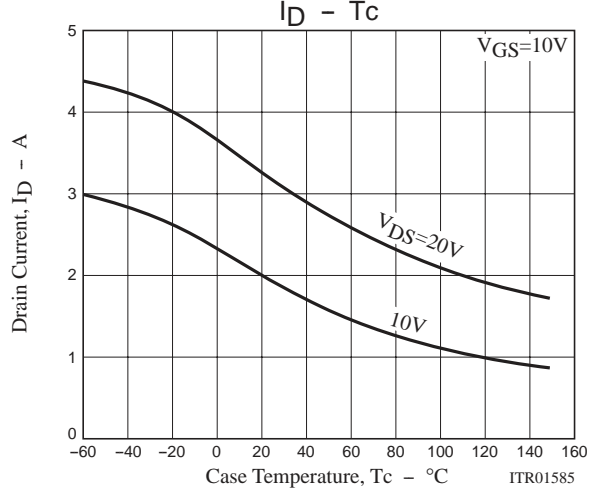
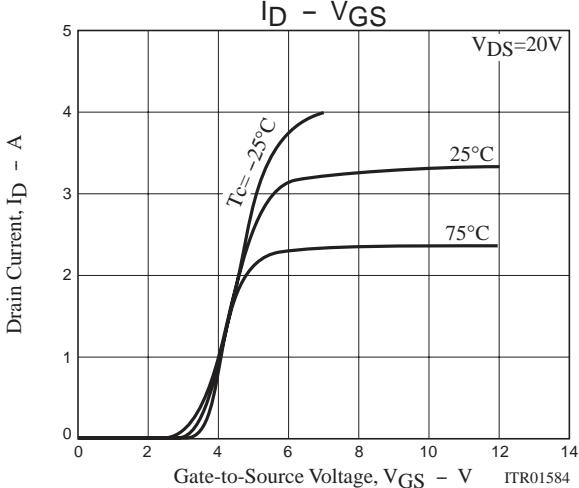
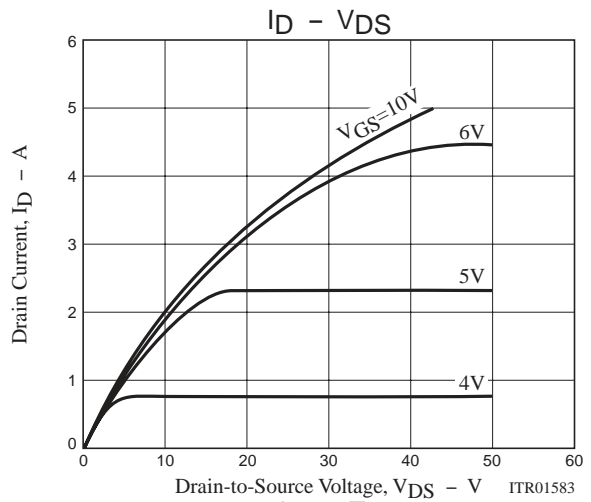
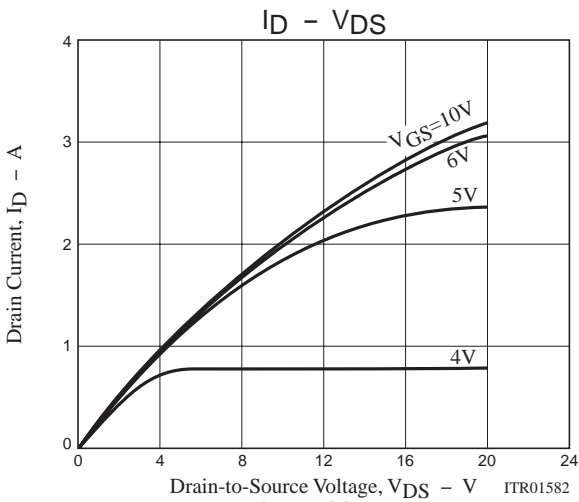
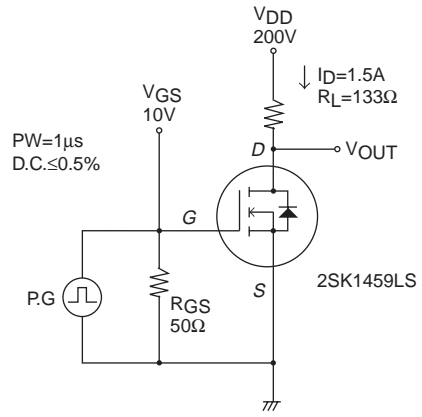
Package Dimensions

unit : mm (typ)

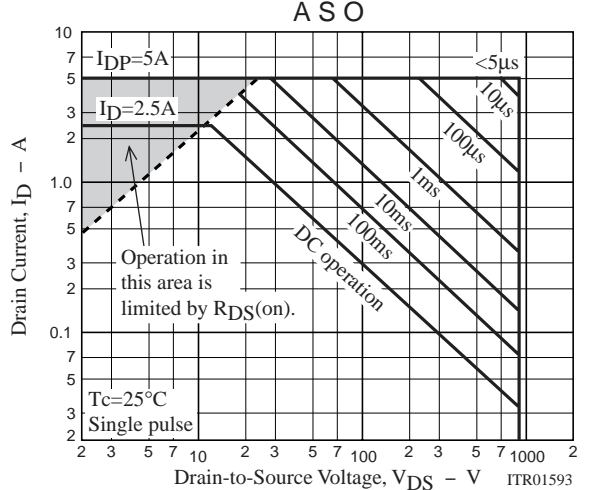
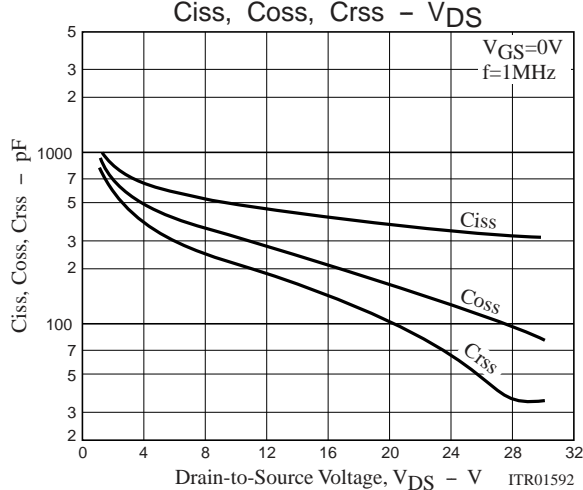
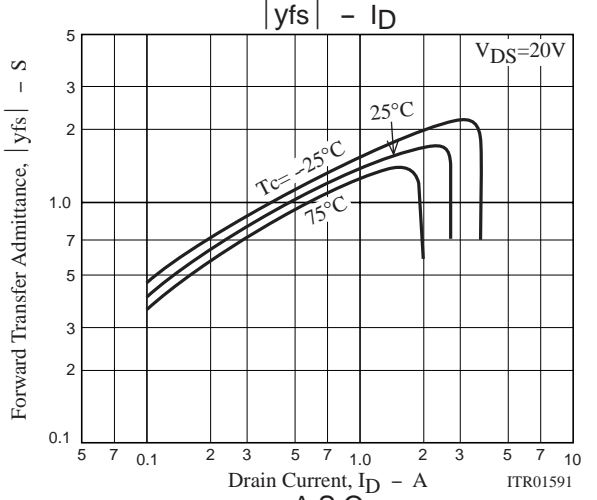
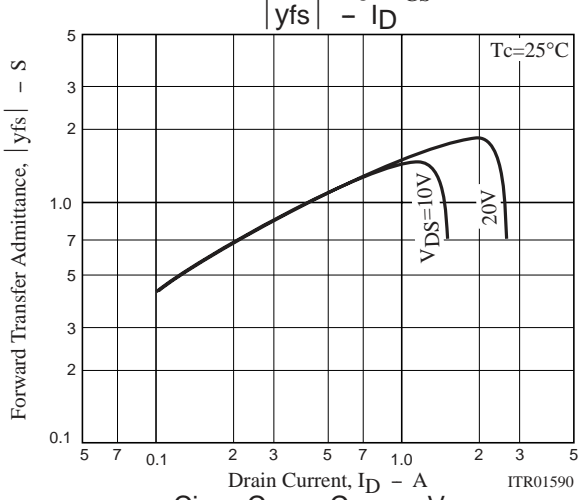
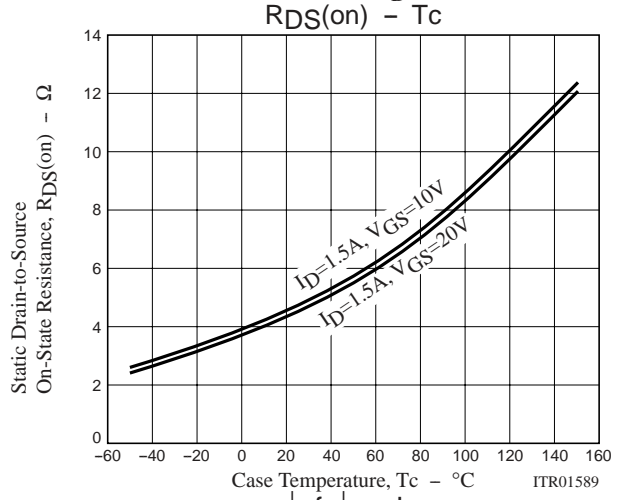
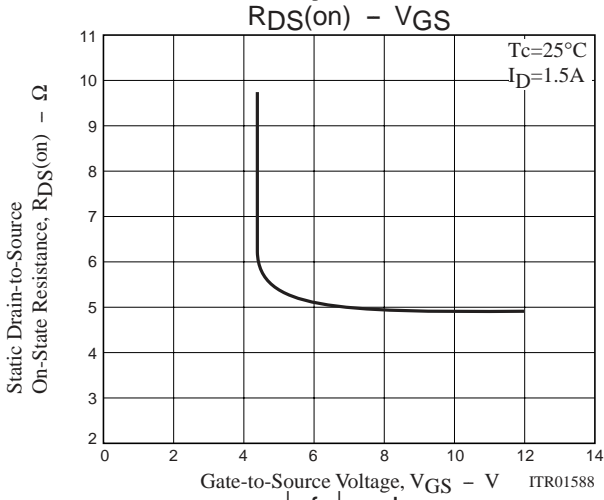
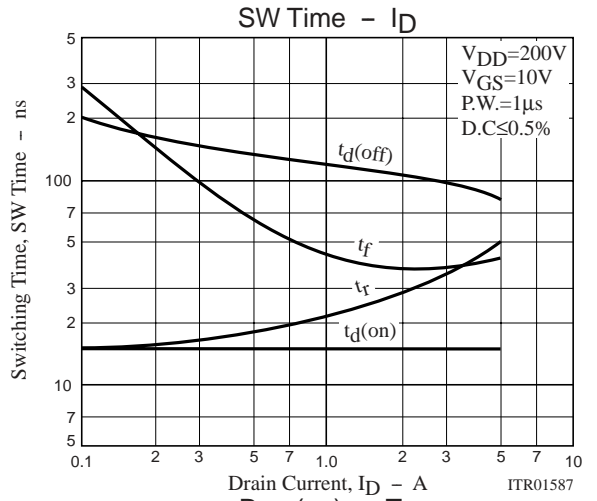
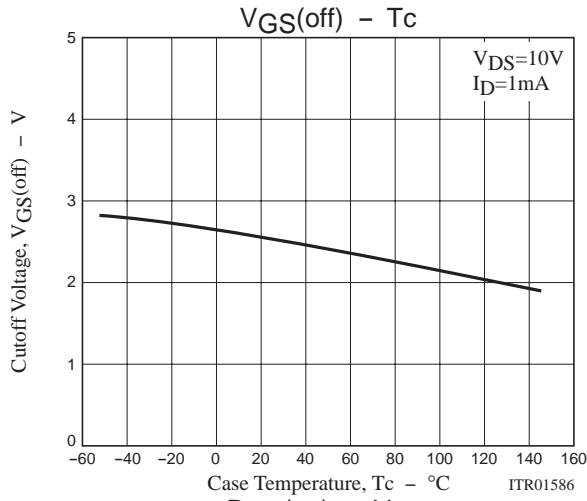
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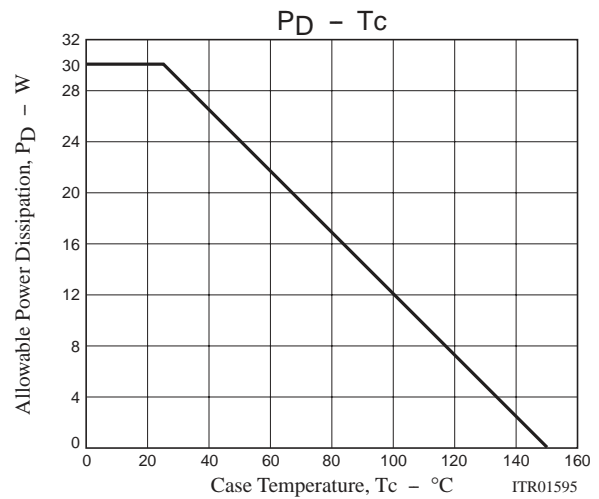
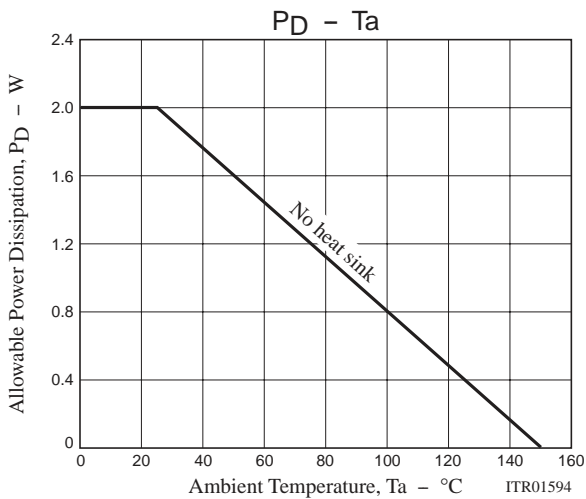
Switching Time Test Circuit



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