



Ultrahigh-Speed Switching Applications

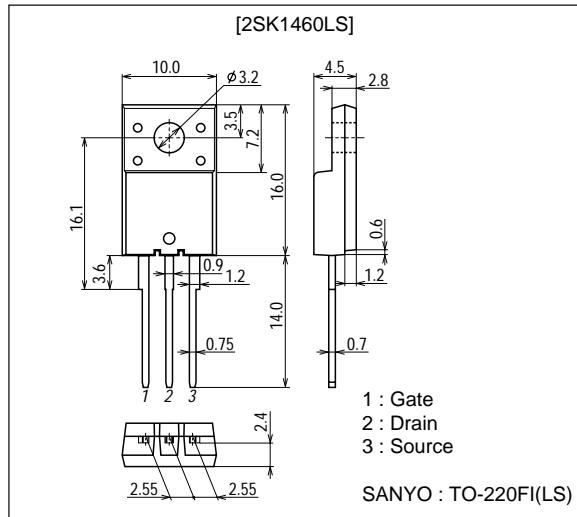
Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- Micaless package facilitating mounting.

Package Dimensions

unit : mm

2078C



Specifications

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

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		3.5	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	7	A
Allowable Power Dissipation	P_D		2.0	W
		$T_c = 25^\circ C$	40	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0$		900		V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=900\text{V}$, $V_{GS}=0$				1.0 mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 30\text{V}$, $V_{DS}=0$				± 100 nA
Cutoff Voltage	$V_{GS(\text{off})}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$		2.0		3.0 V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=20\text{V}$, $I_D=2\text{A}$		1.0	2.0	S

Marking : K1460

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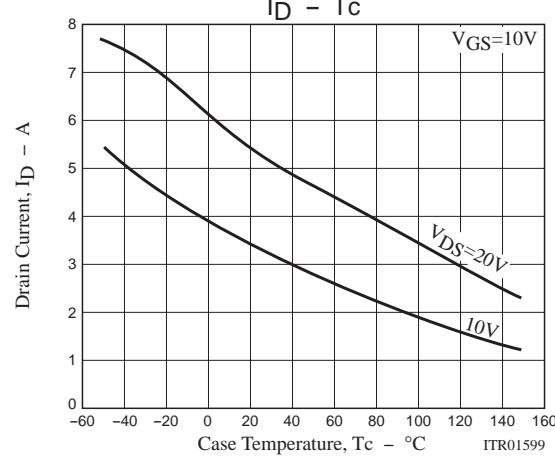
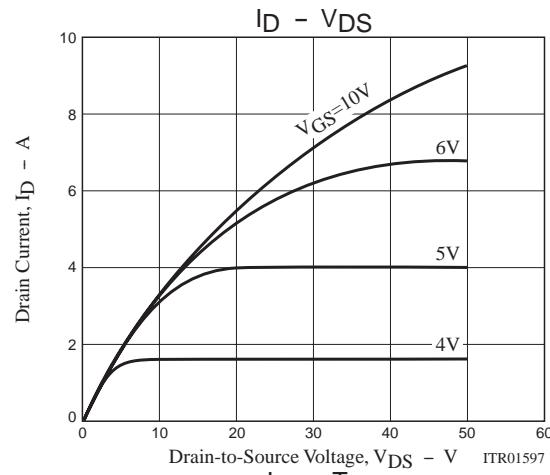
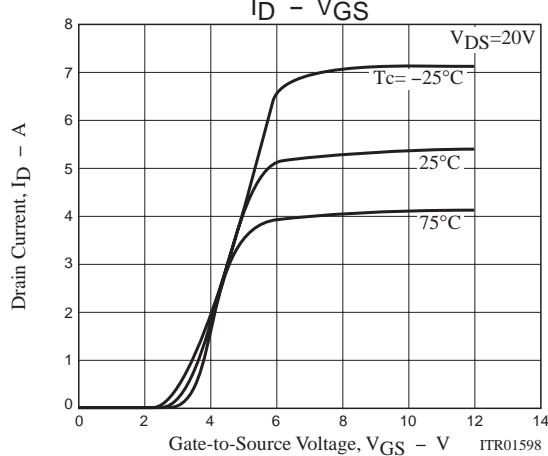
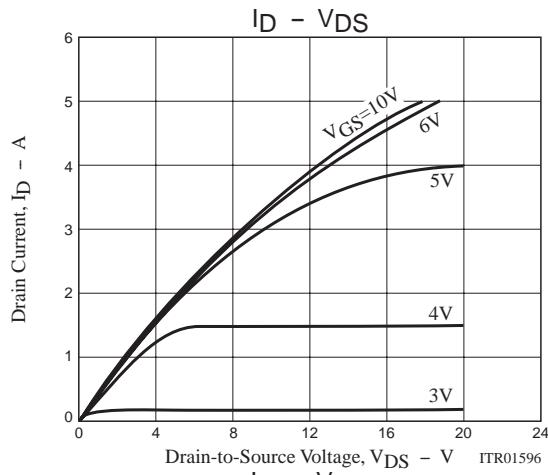
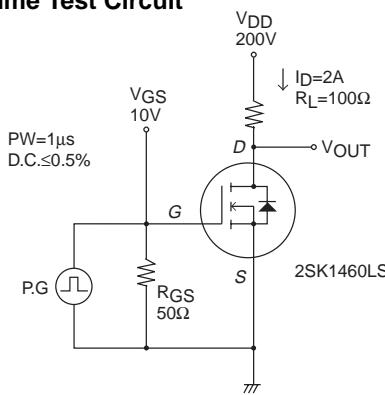
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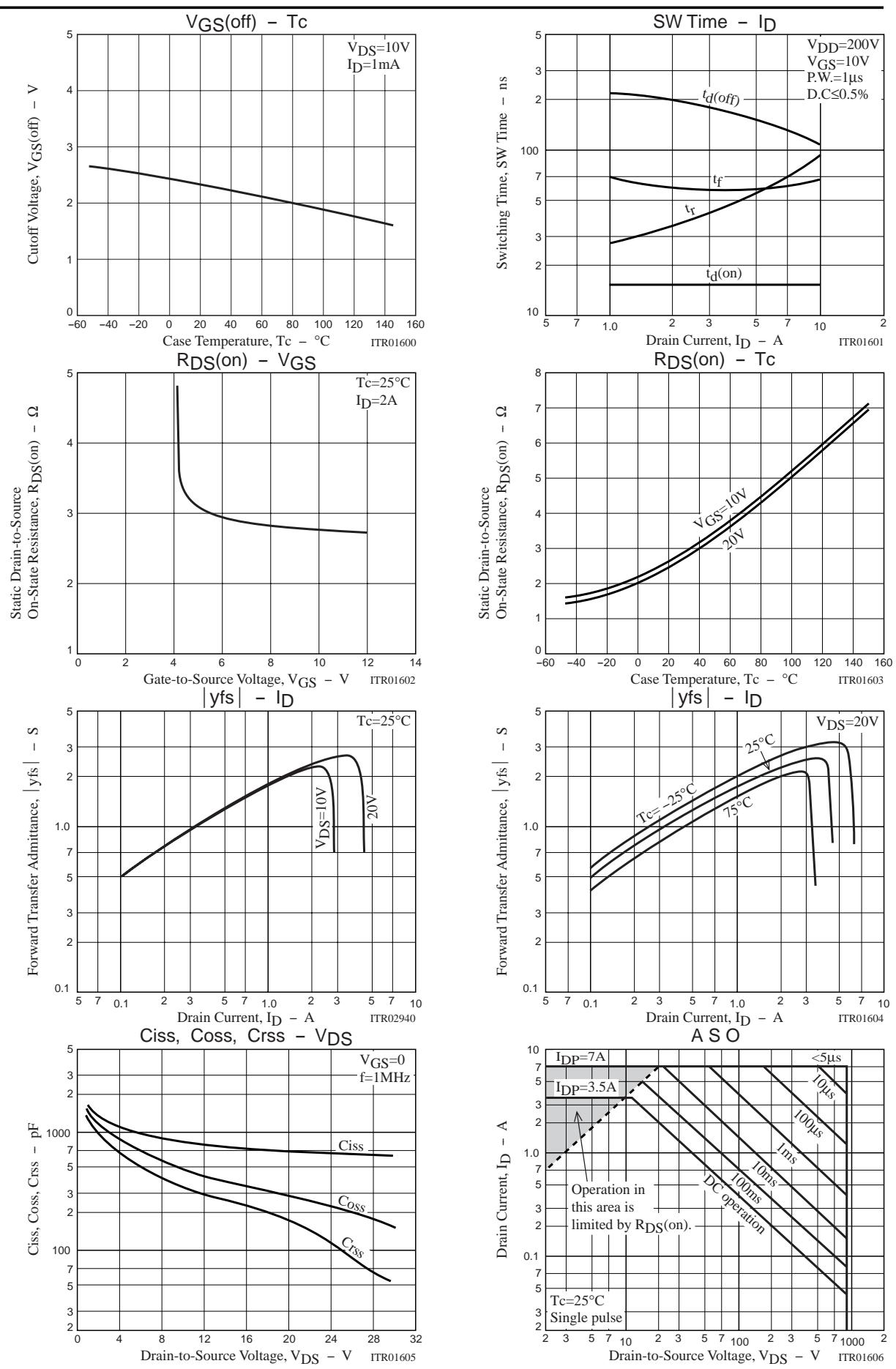
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=2A, V_{GS}=10V$		2.8	3.6	Ω
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		700		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		300		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		170		pF
Turn-ON Delay Time	$t_{d(on)}$	$I_D=2A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		15		ns
Rise Time	t_r	$I_D=2A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		35		ns
Turn-OFF Delay Time	$t_{d(off)}$	$I_D=2A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		200		ns
Fall Time	t_f	$I_D=2A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		65		ns
Diode Forward Voltage	V_{SD}	$I_S=3.5A, V_{GS}=0$			1.8	V

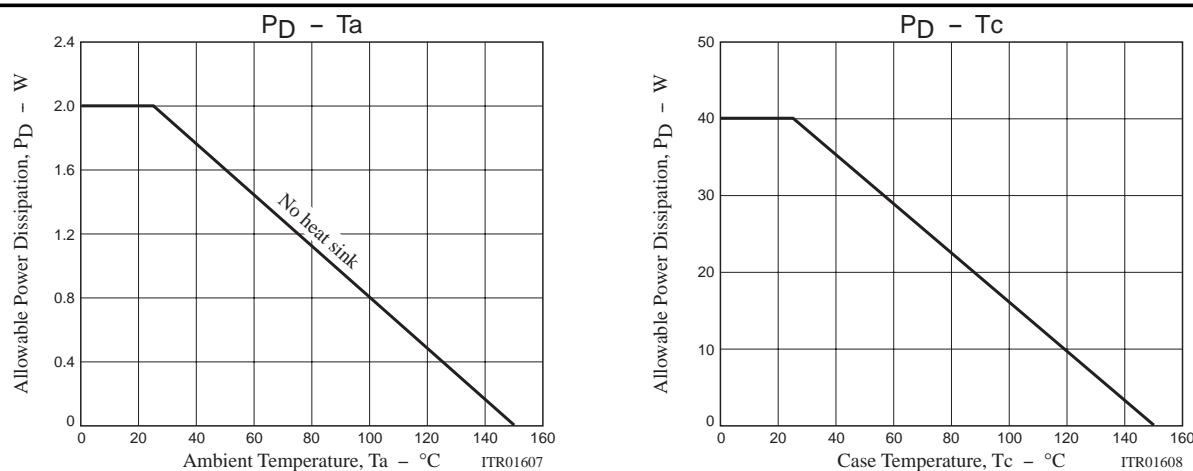
(Note) Be careful in handling the 2SK1460LS because it has no protection diode between gate and source.

Switching Time Test Circuit



2SK1460LS





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