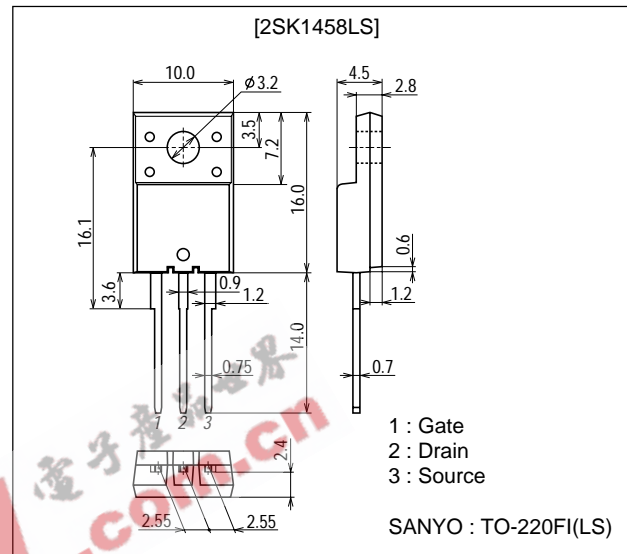


**2SK1458LS****Ultrahigh-Speed Switching Applications****Features**

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

Package Dimensionsunit : mm
2078C**Specifications****Absolute Maximum Ratings** at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		900	V
Gate-to-Source Voltage	V_{GS}		± 30	V
Drain Current (DC)	I_D		0.2	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	0.4	A
Allowable Power Dissipation	P_D		2.0	W
		$T_c=25^\circ\text{C}$	20	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0$	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	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	2.0		3.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=20\text{V}$, $I_D=0.1\text{A}$	0.08	0.15		S

Marking : K1458

Continued on next page.

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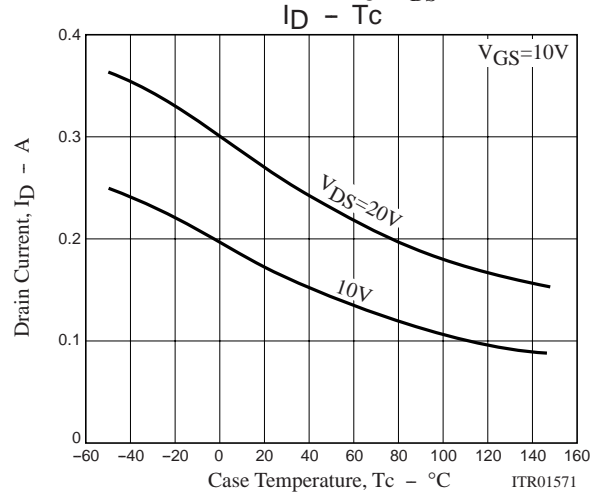
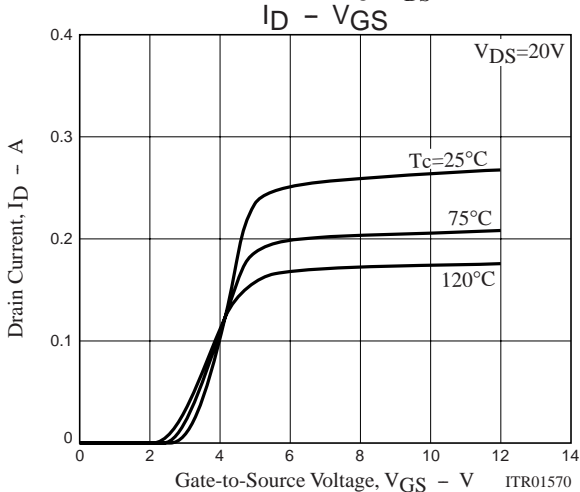
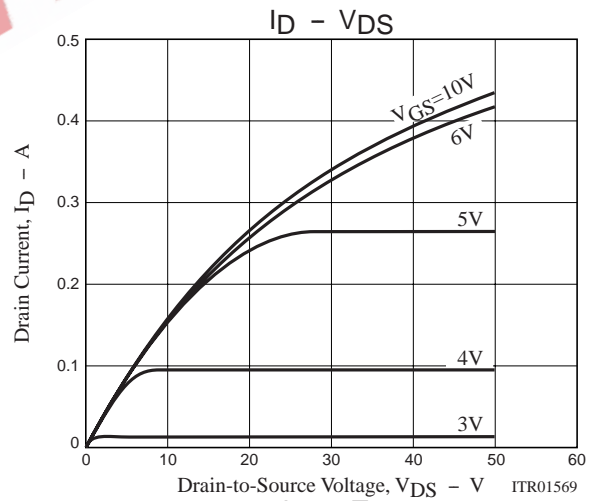
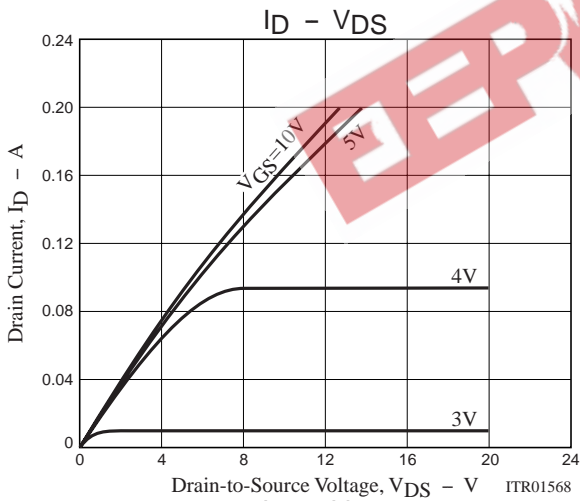
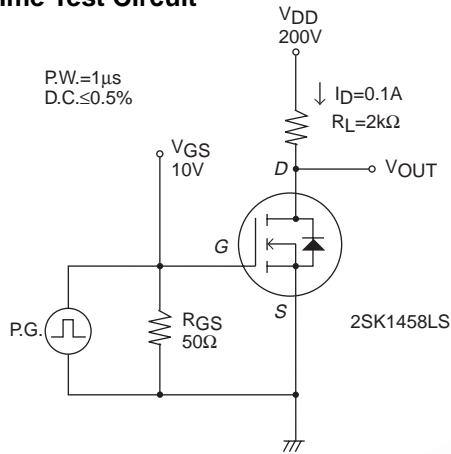
2SK1458LS

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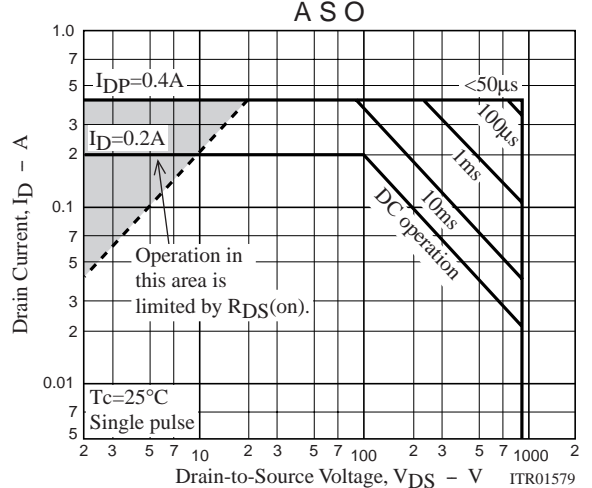
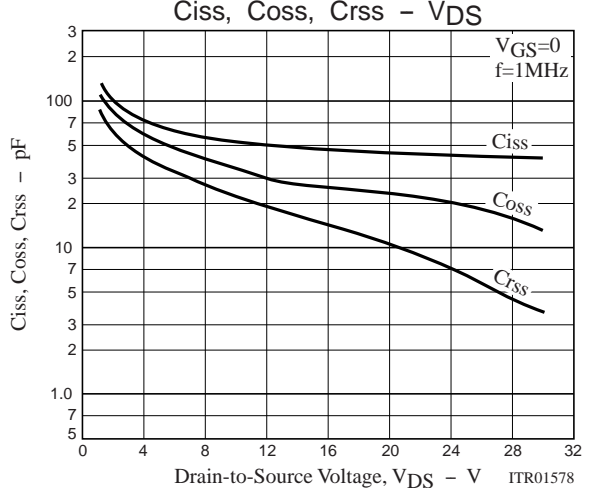
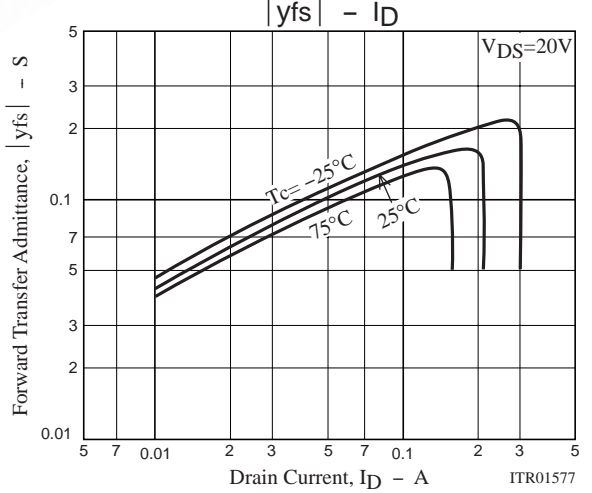
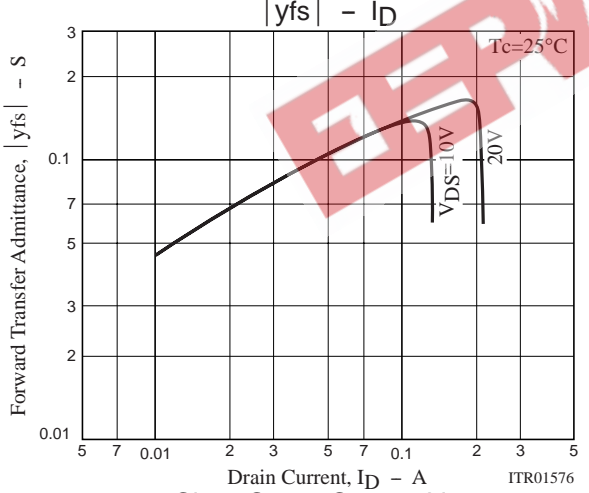
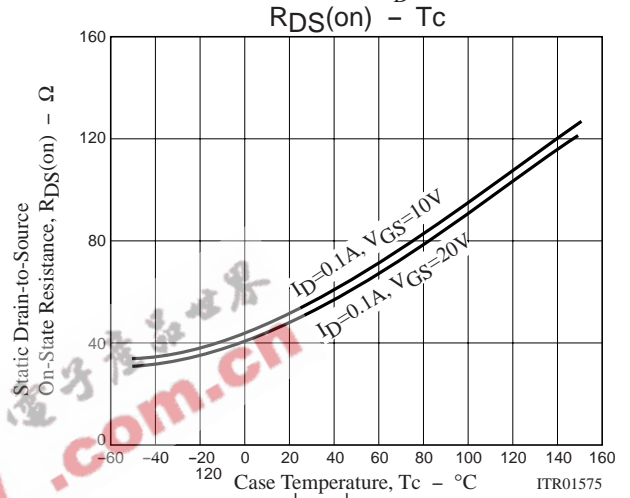
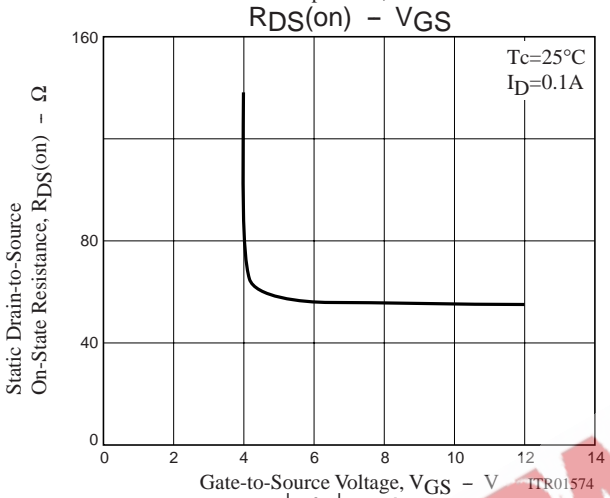
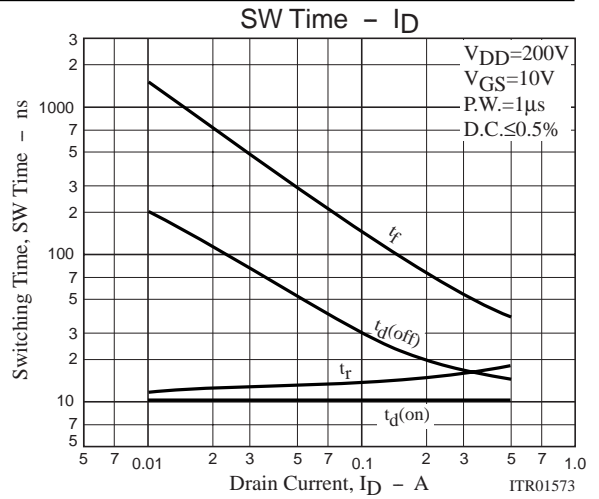
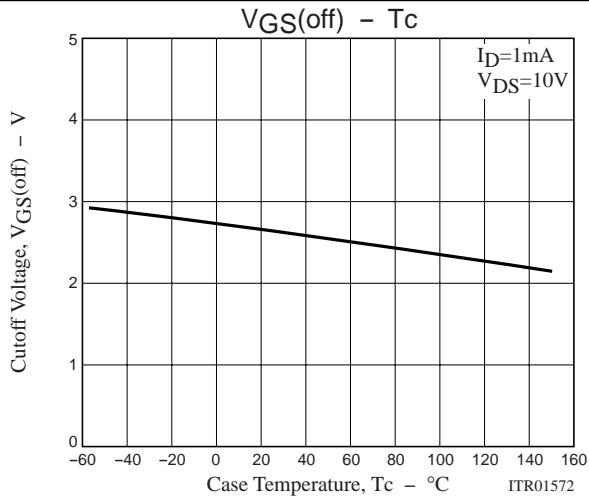
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=0.1A, V_{GS}=10V$		50	70	Ω
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		45		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		25		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		10		pF
Turn-ON Delay Time	$t_d(on)$	$I_D=0.1A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		10		ns
Rise Time	t_r	$I_D=0.1A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		15		ns
Turn-OFF Delay Time	$t_d(off)$	$I_D=0.1A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		30		ns
Fall Time	t_f	$I_D=0.1A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		180		ns
Diode Forward Voltage	V_{SD}	$I_S=0.2A, V_{GS}=0$			1.8	V

(Note) Be careful in handling the 2SK1458LS because it has no protection diode between gate and source.

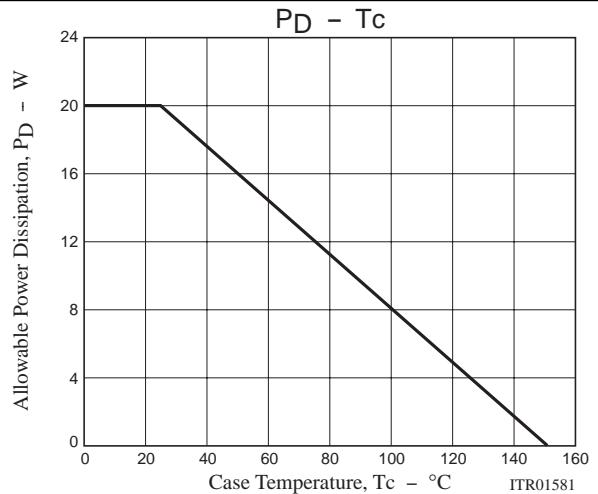
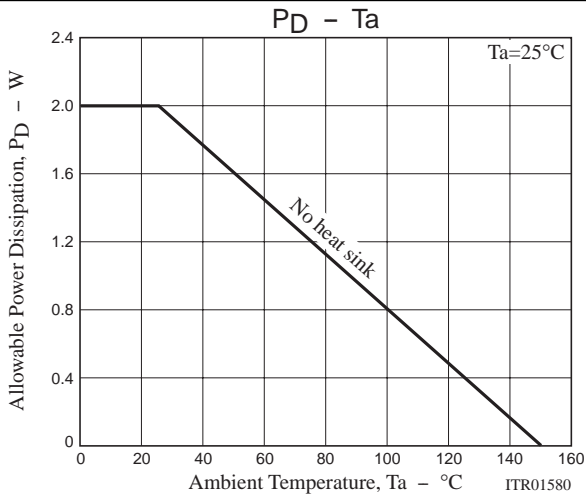
Switching Time Test Circuit



2SK1458LS



2SK1458LS



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