

SANYO	No.3462A	2SK1459
		N-Channel Silicon MOSFET Ultrahigh-Speed Switching Applications

Features

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

Absolute Maximum Ratings at Ta = 25°C

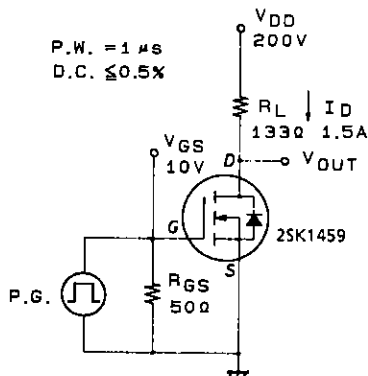
Drain-to-Source Voltage	V_{DSS}		900	V
Gate-to-Source Voltage	V_{GSS}		±30	V
Drain Current(DC)	I_D		2.5	A
Drain Current(Pulse)	I_{DP}	PW ≤ 10μs, duty cycle ≤ 1%	5	A
Allowable Power Dissipation	P_D		2.0	W
		Tc = 25°C	30	W
Channel Temperature	T_{ch}		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	
D-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	900			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 900V, V_{GS} = 0$			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = ±30V, V_{DS} = 0$			±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		25		ns	
Turn-OFF Delay Time	$t_{d(off)}$		120		ns	
Fall Time	t_f		40		ns	
Diode Forward Voltage	V_{SD}	$I_S = 2.5A, V_{GS} = 0$			1.8	V

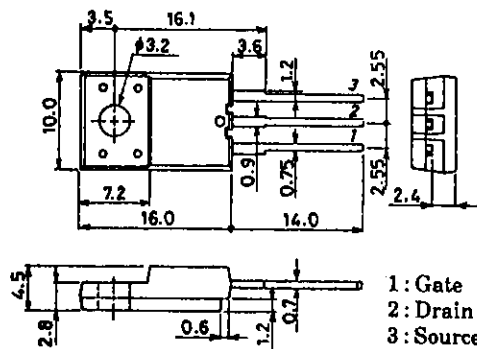
(Note) Be careful in handling the 2SK1459 because it has no protection diode between gate and source.

Switching Time Test Circuit



Package Dimensions 2078B

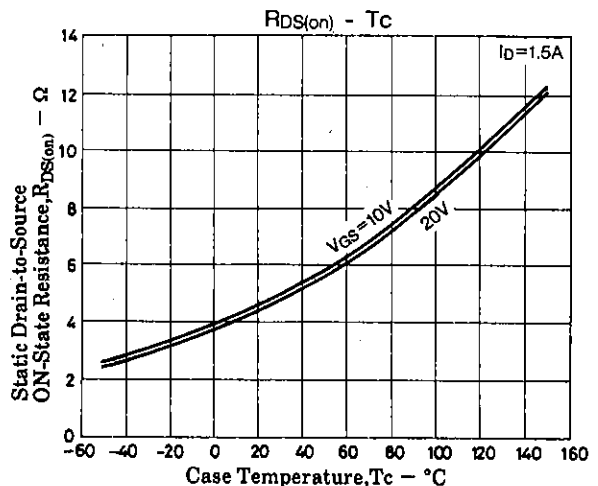
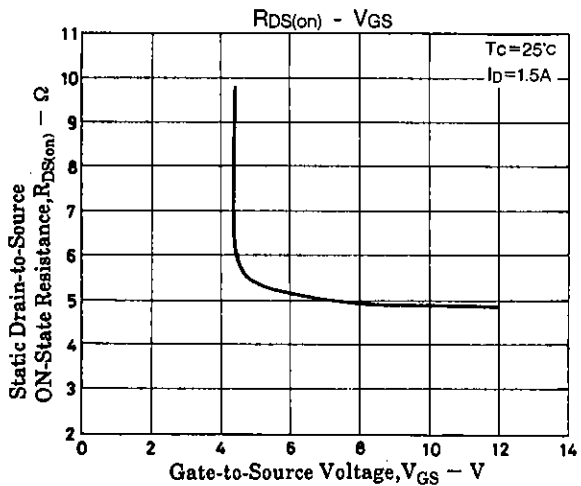
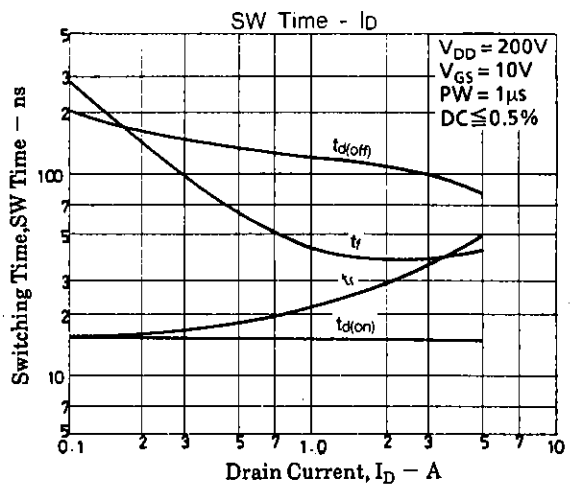
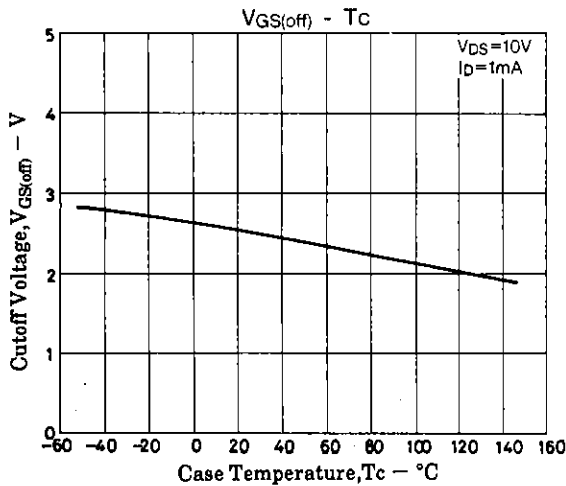
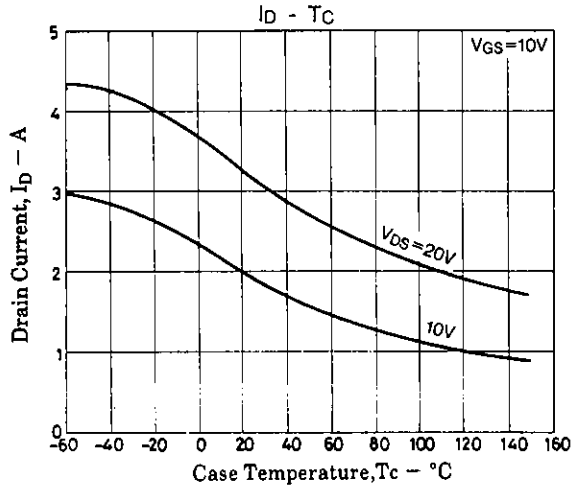
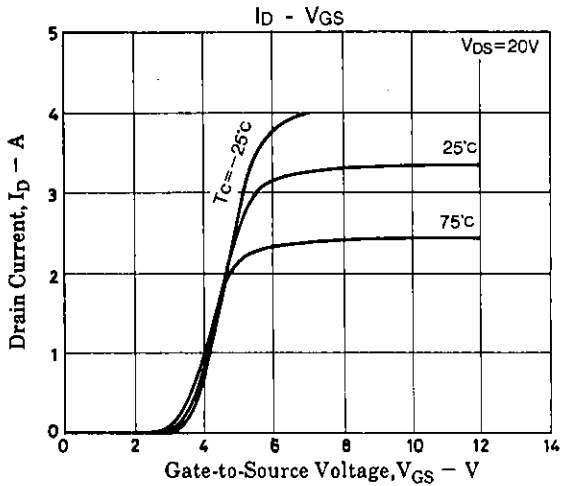
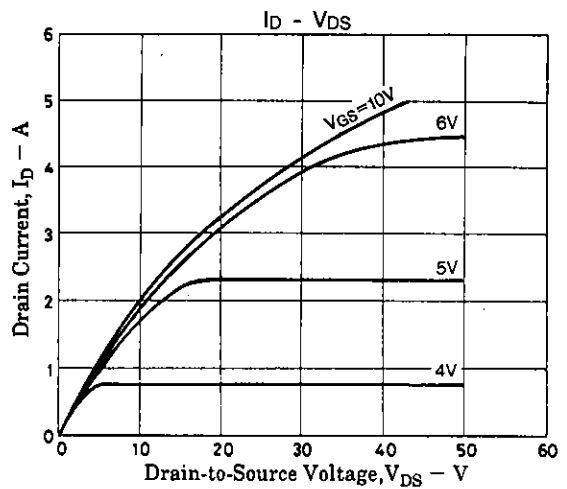
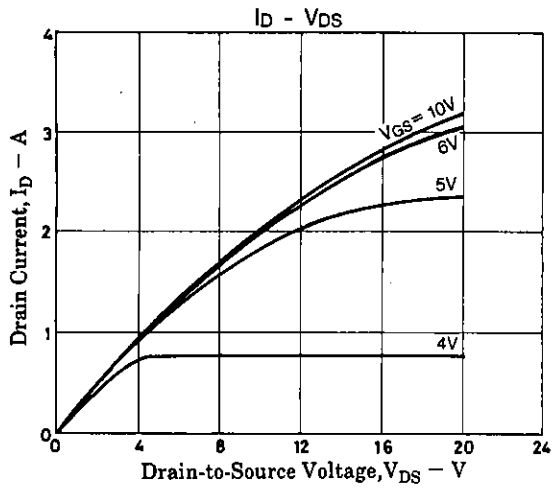
(unit : mm)

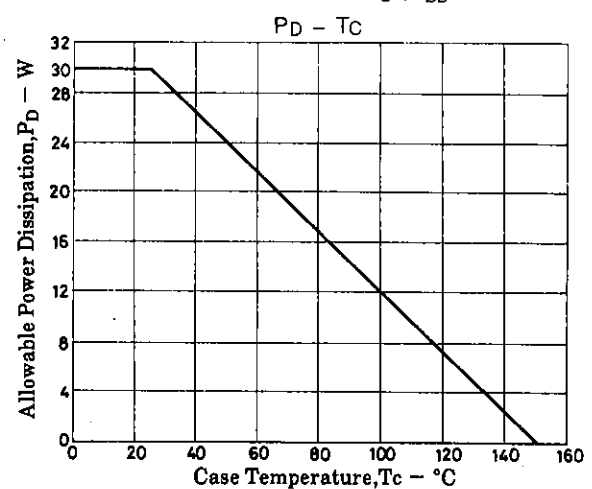
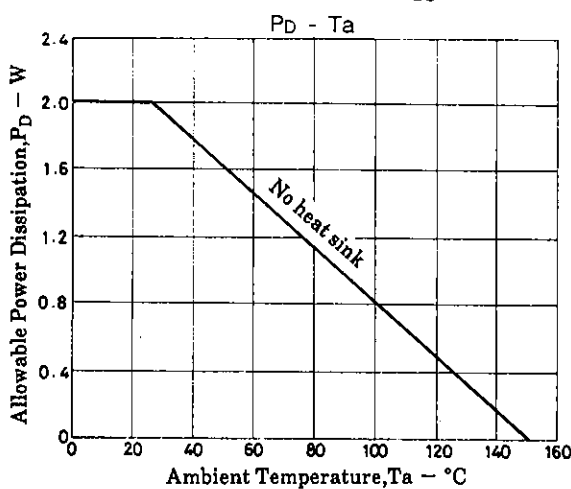
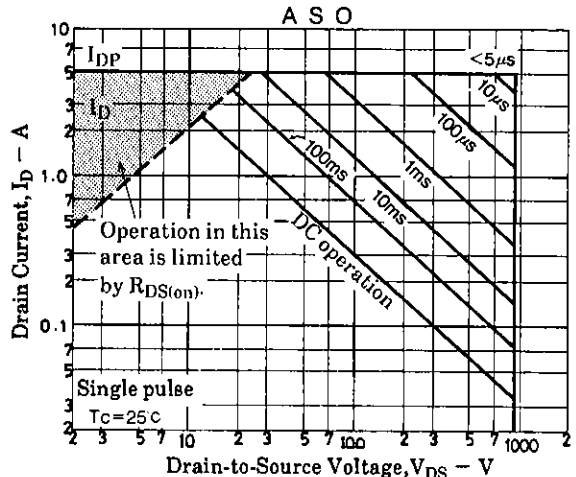
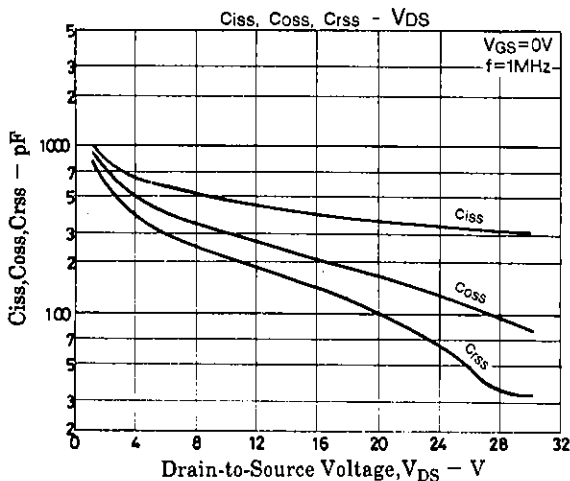
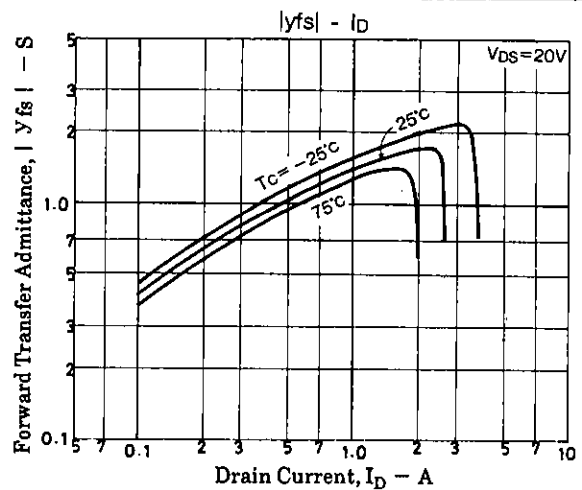
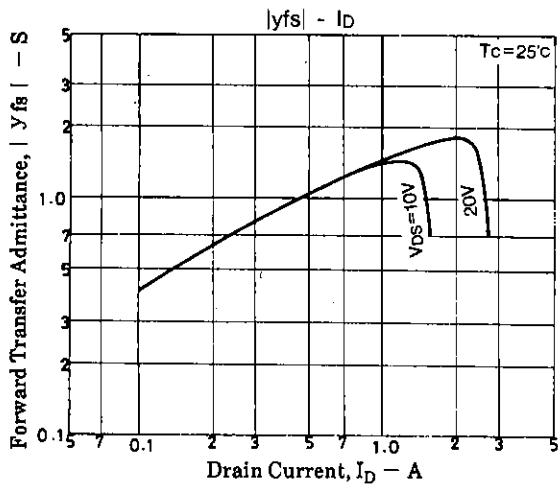


- 1: Gate
- 2: Drain
- 3: Source

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