



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

Parameter	Symbol	Value	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}	5	A
Allowable Power Dissipation	P _D	2.0	W
Channel Temperature	T _{ch}	30	W
Storage Temperature	T _{stg}	150	°C

T_c = 25°C

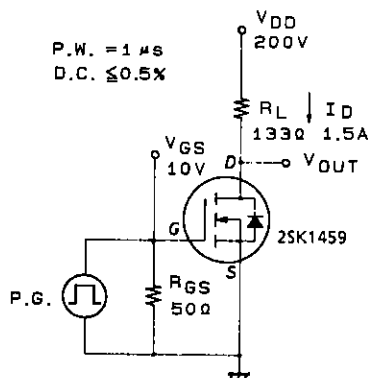
-55 to +150 °C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Test Conditions	min	typ	max	unit
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

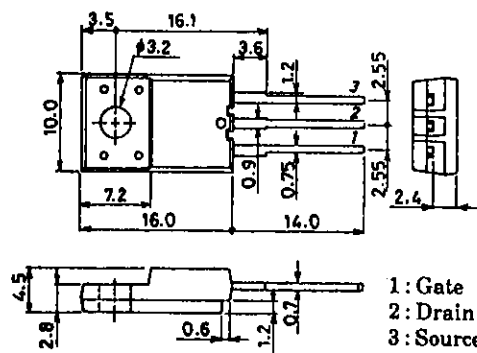
(Note) Be careful in handling the 2SK1459 because it has no protection diode between gate and source.

Switching Time Test Circuit



Package Dimensions 2078B

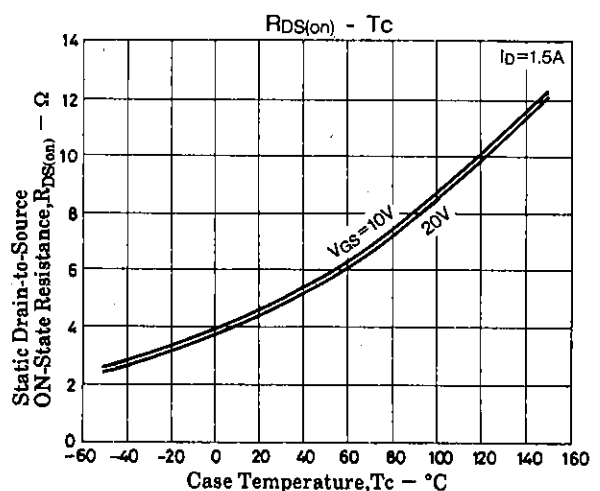
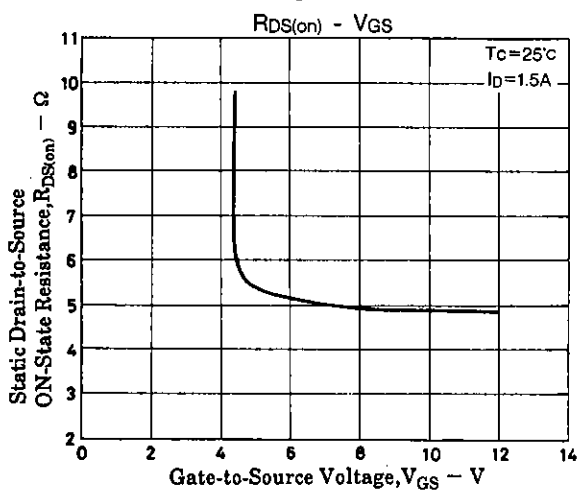
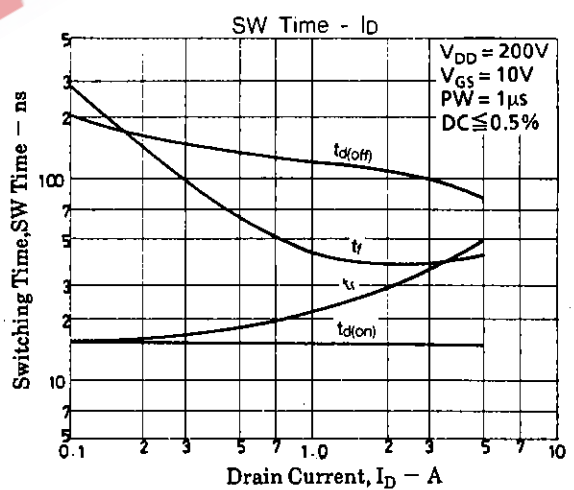
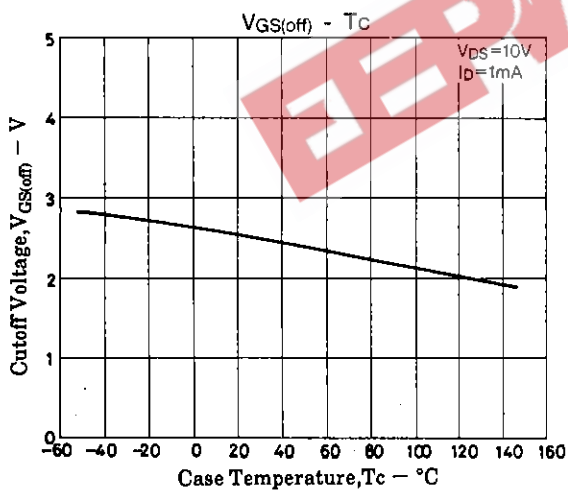
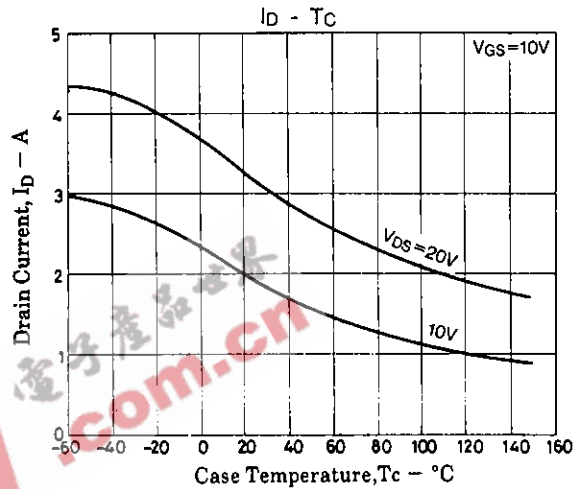
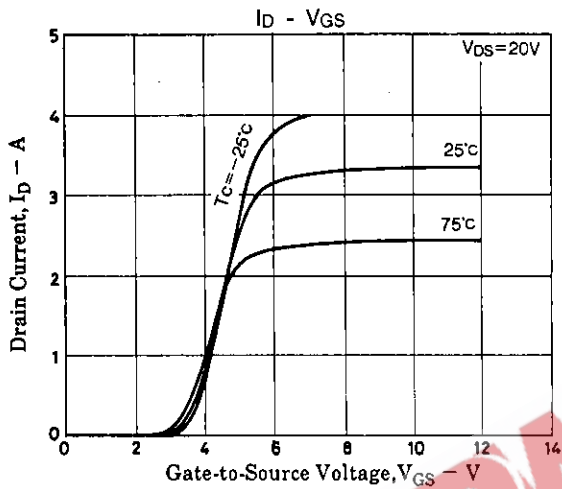
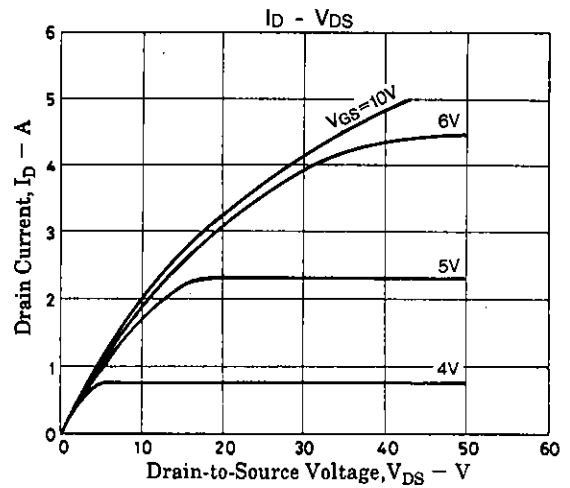
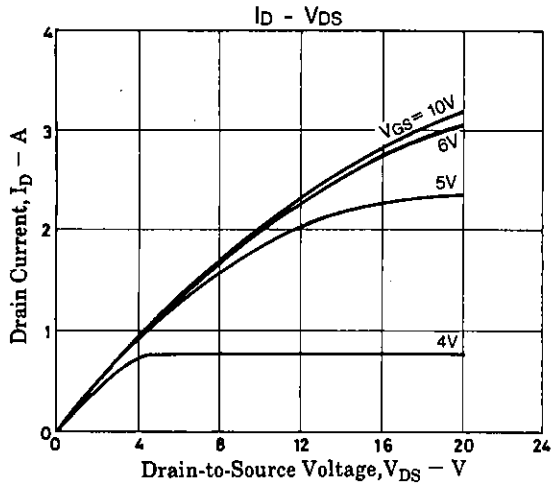
(unit : mm)

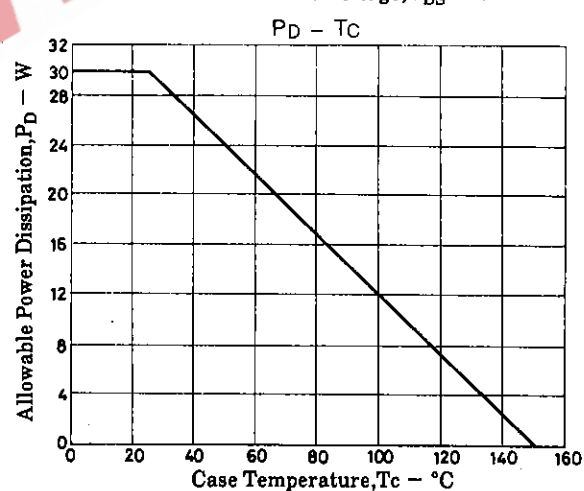
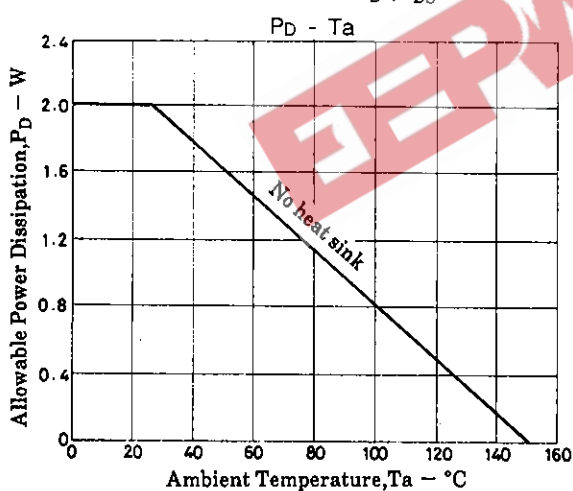
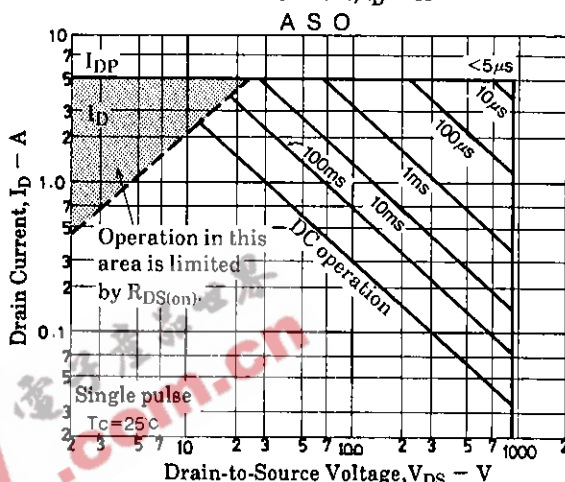
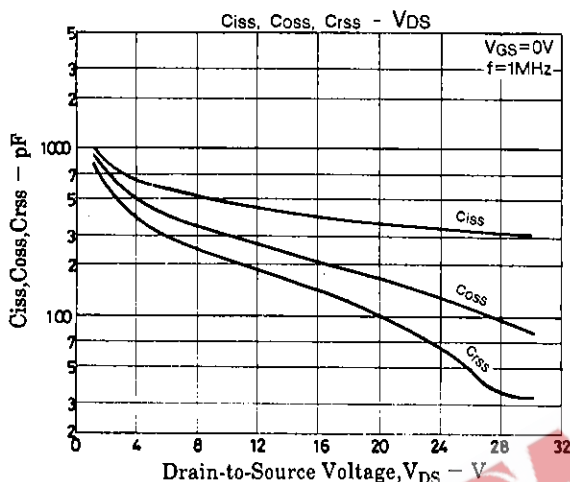
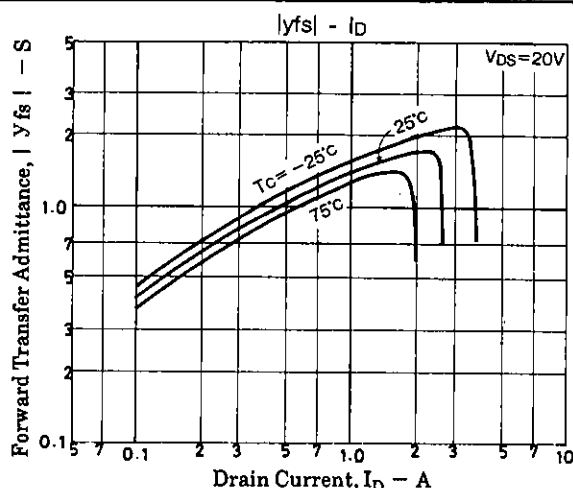
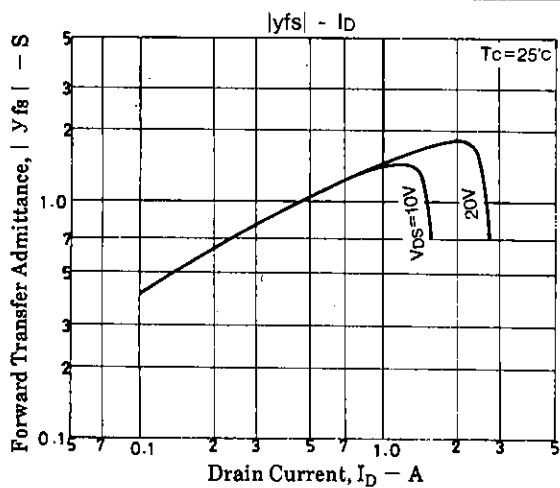


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