

SANYO	No.3449A	2SK1446
		N-Channel Silicon MOSFET Ultrahigh-Speed Switching Applications

Features

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

Absolute Maximum Ratings at Ta = 25°C

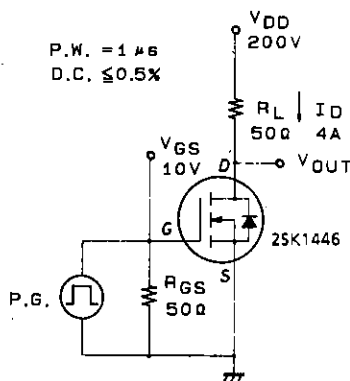
Drain-to-Source Voltage	V _{DSS}		450	V
Gate-to-Source Voltage	V _{GSS}		±30	V
Drain Current(DC)	I _D		7	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	28	A
Allowable Power Dissipation	P _D		2.0	W
		T _c = 25°C	35	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	450			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} = 450V, 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} = 10V, I _D = 4A	3.0	6.0		S
Static Drain-to-Source ON-State Resistance	R _{DS(on)}	I _D = 4A, V _{GS} = 10V		0.6	0.8	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		1200		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		180		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		70		pF
Turn-ON Delay Time	t _{d(on)}	I _D = 4A, V _{GS} = 10V V _{DD} = 200V, R _{GS} = 50Ω		20		ns
Rise Time	t _r			40		ns
Turn-OFF Delay Time	t _{d(off)}			160		ns
Fall Time	t _f			60		ns
Diode Forward Voltage	V _{SD}	I _S = 7A, V _{GS} = 0			1.8	V

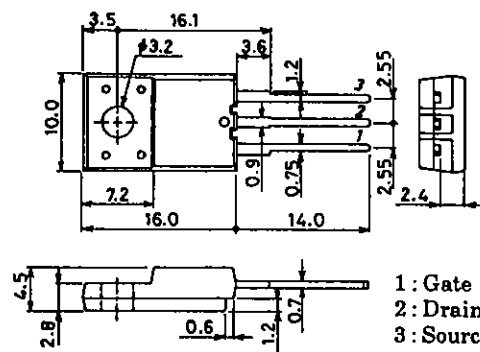
(Note) Be careful in handling the 2SK1446 because it has no protection diode between gate and source.

Switching Time Test Circuit



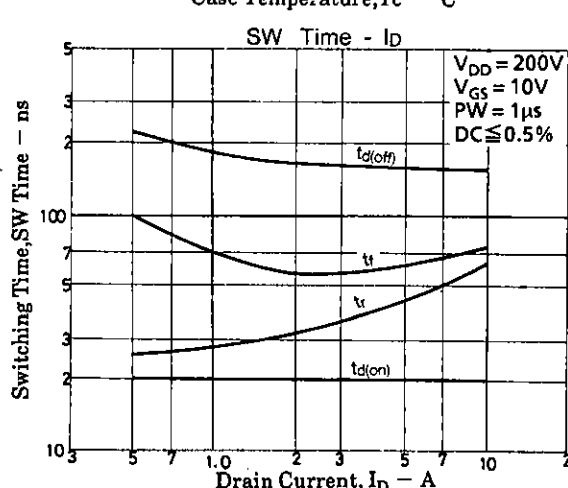
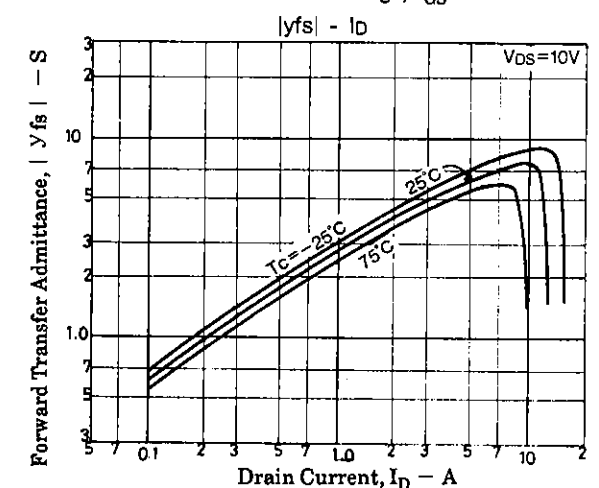
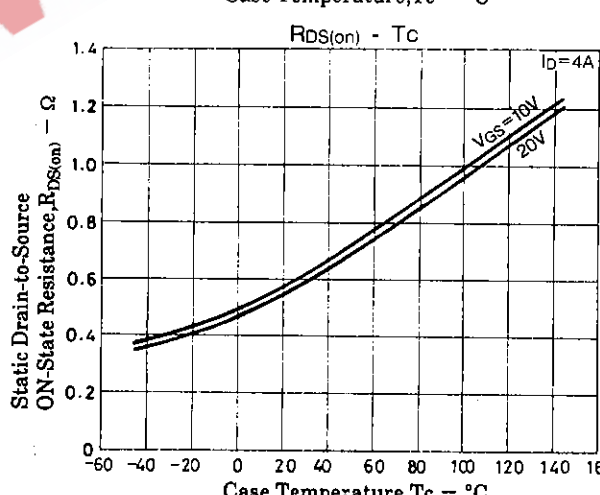
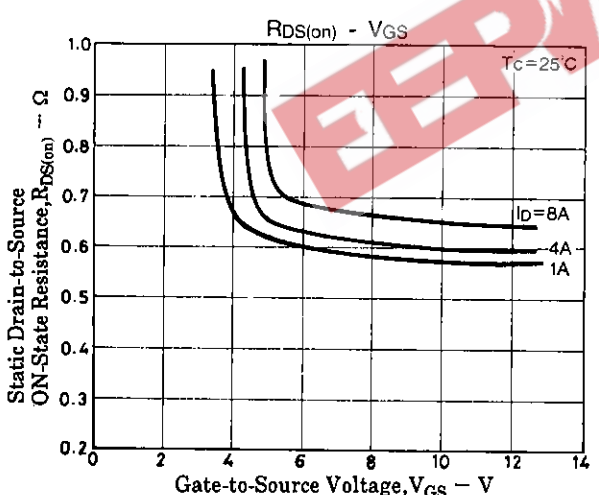
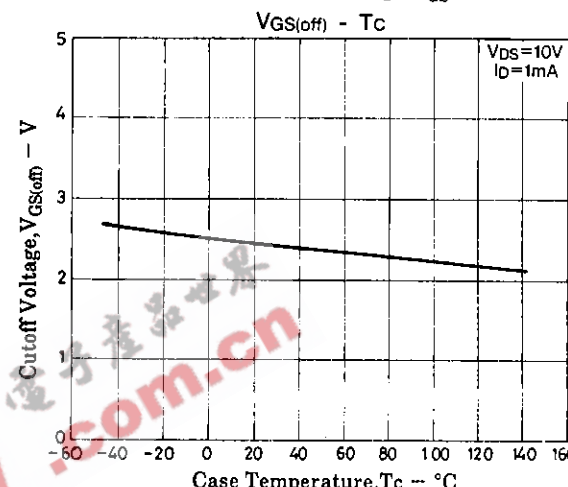
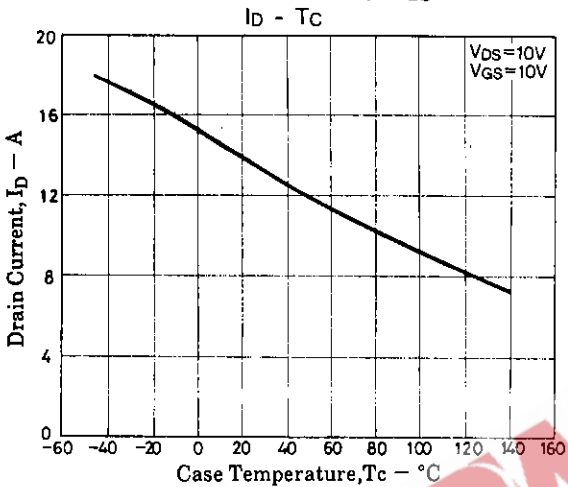
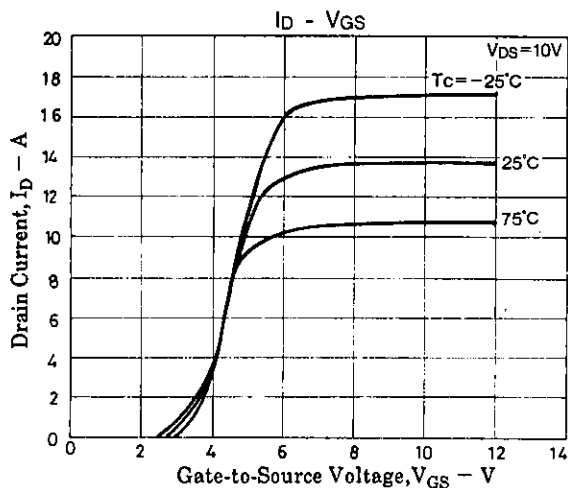
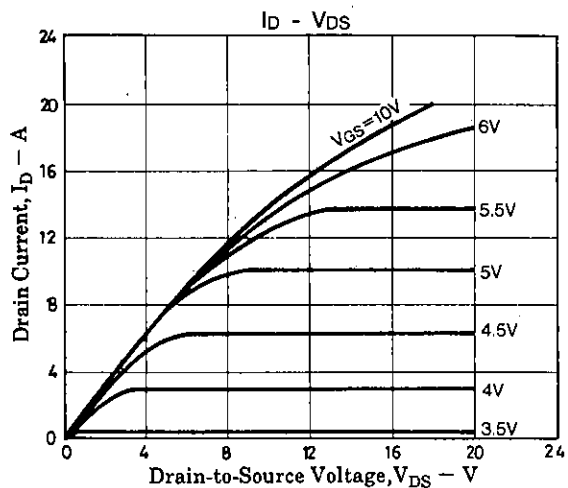
Package Dimensions 2078B

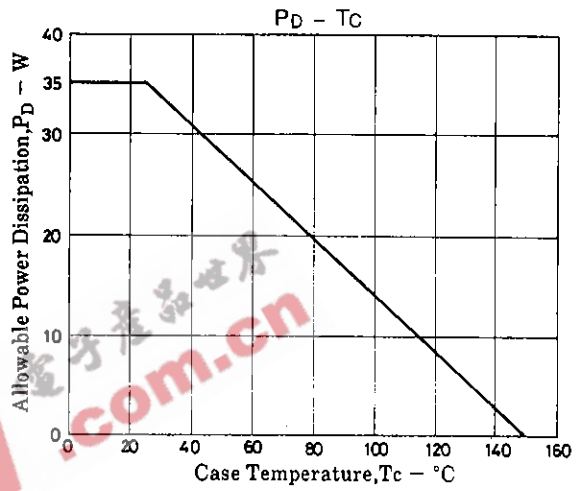
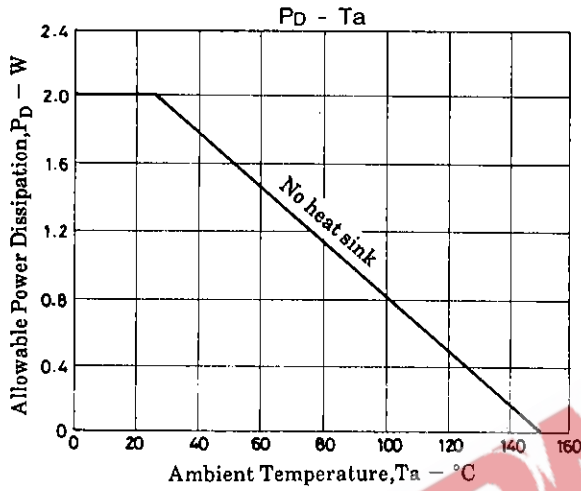
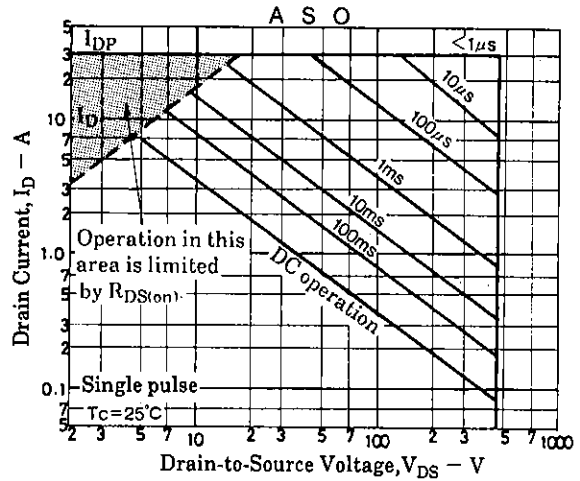
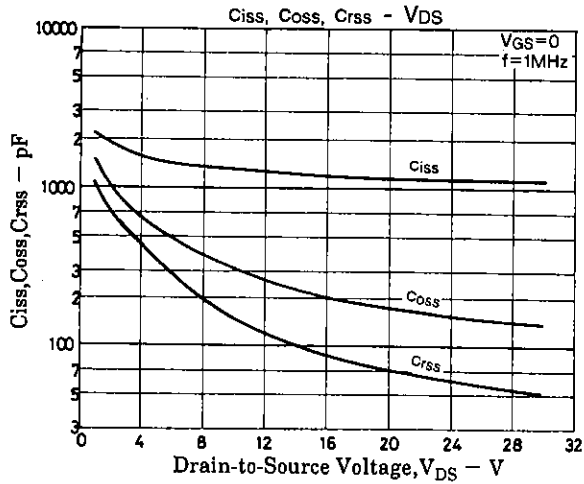
(unit : mm)



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