

SANYO	No.3450A	2SK1447
		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

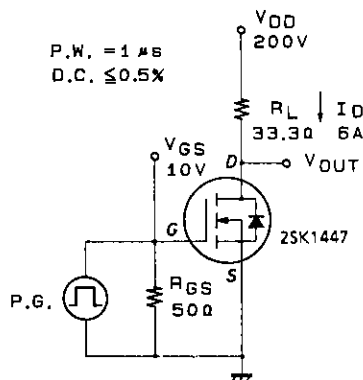
			unit
Drain-to-Source Voltage	V _{DSS}	450	V
Gate-to-Source Voltage	V _{GSS}	±30	V
Drain Current(DC)	I _D	9	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	36
Allowable Power Dissipation	P _D	2.0	W
		Tc = 25°C	40
Channel Temperature	Tch	150	°C
Storage Temperature	Tstg	-55 to +150	°C

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 = 6A	4.0	8.0		S
Static Drain-to-Source ON-State Resistance	R _{DSON}	I _D = 6A, V _{GS} = 10V	0.47	0.6		Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		1600		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		220		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		80		pF
Turn-ON Delay Time	t _{d(on)}	I _D = 6A, V _{GS} = 10V V _{DD} = 200V, R _{GS} = 50Ω		25		ns
Rise Time	t _r		60		ns	
Turn-OFF Delay Time	t _{d(off)}		250		ns	
Fall Time	t _f		80		ns	
Diode Forward Voltage	V _{SD}	I _S = 9A, V _{GS} = 0			1.8	V

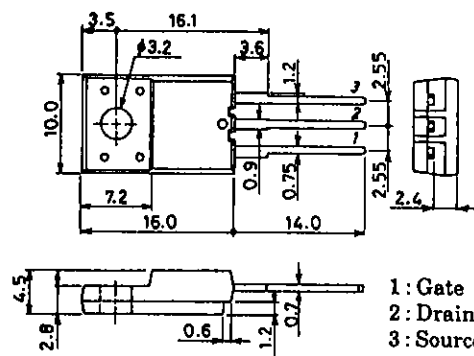
(Note) Be careful in handling the 2SK1447 because it has no protection diode between gate and source.

Switching Time Test Circuit



Package Dimensions 2078B

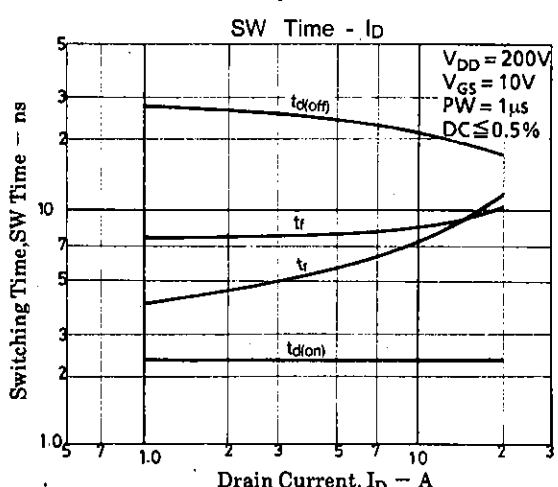
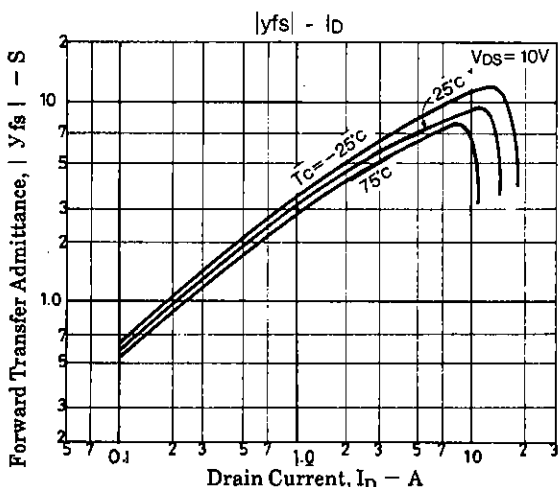
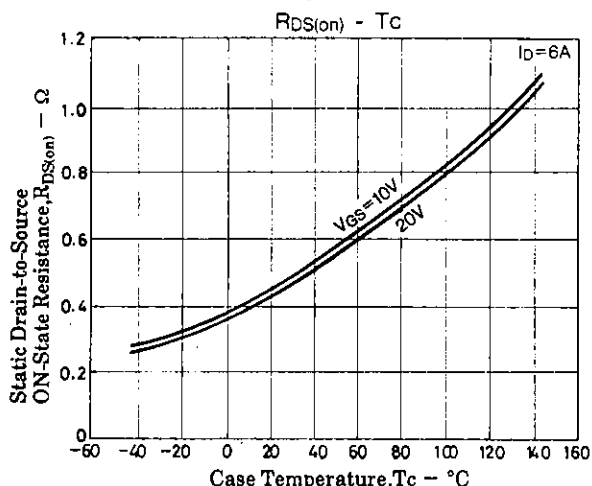
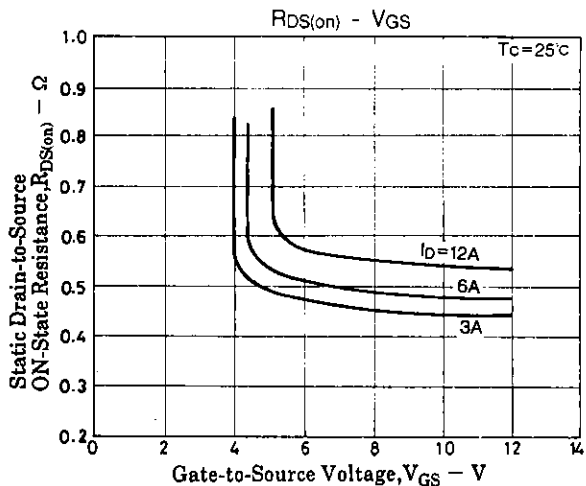
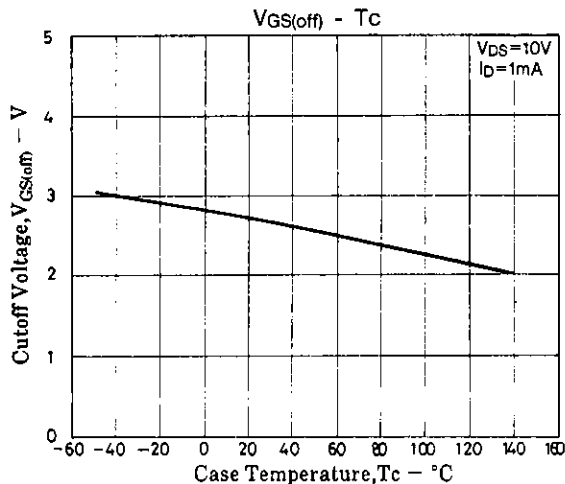
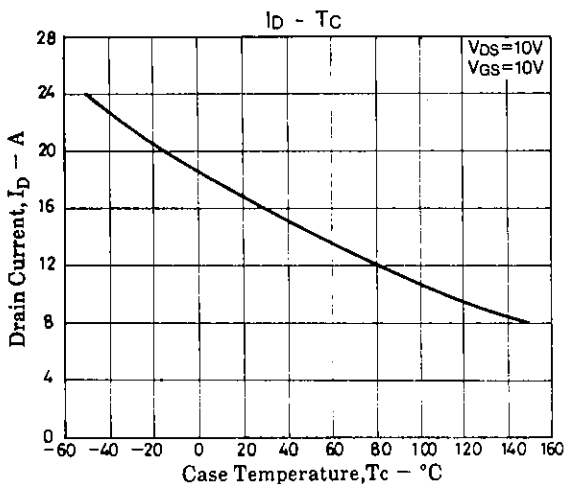
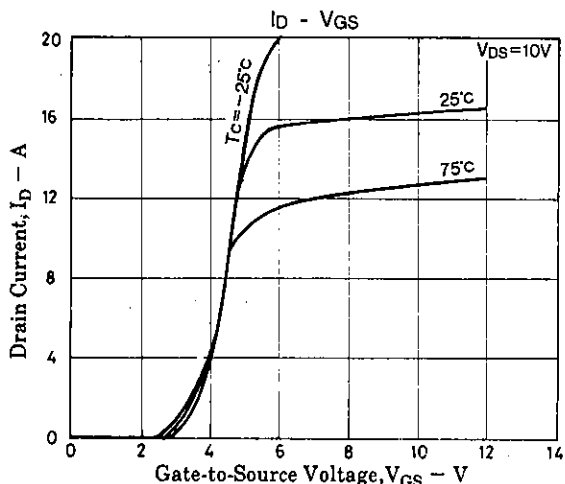
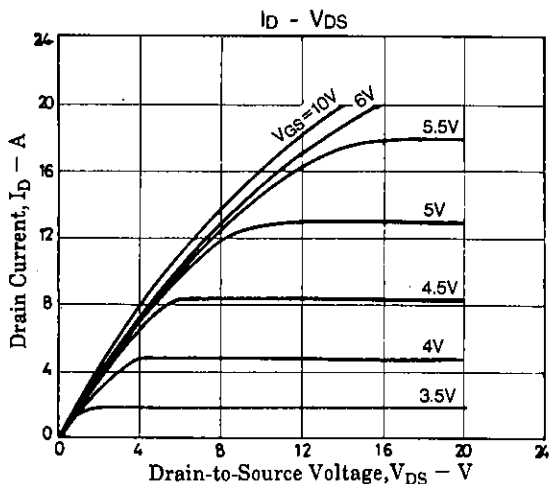
(unit: mm)

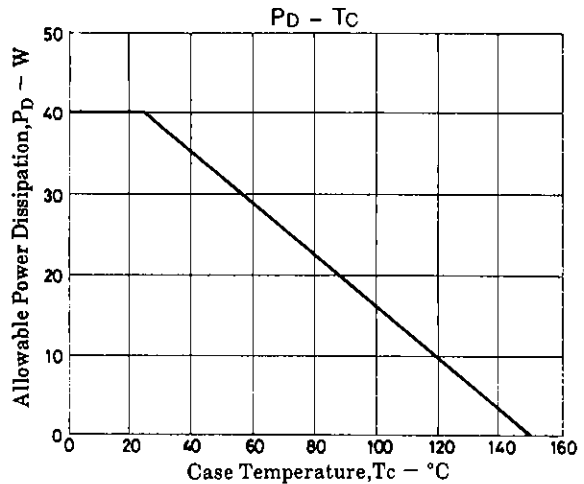
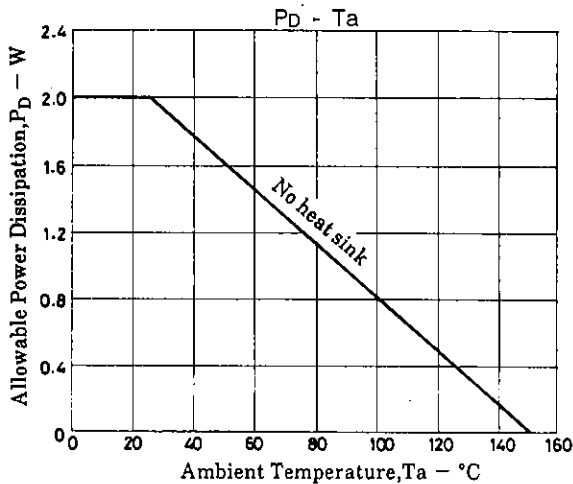
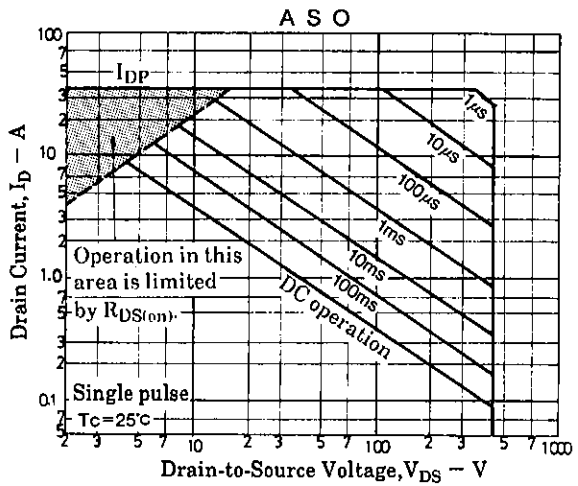
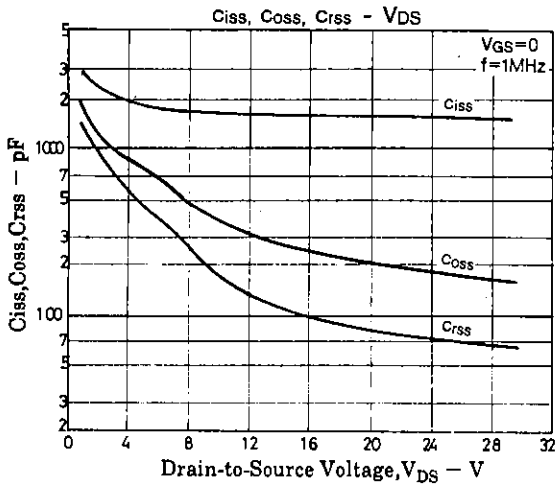


- 1: Gate
- 2: Drain
- 3: Source

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