

**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.

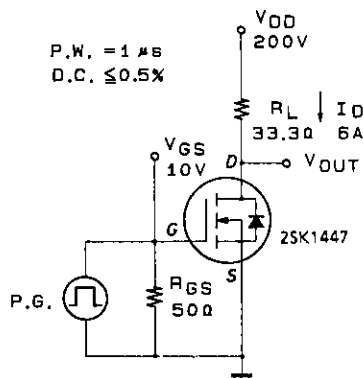
**Absolute Maximum Ratings at Ta = 25°C**

			unit
Drain-to-Source Voltage	$V_{DS}$	450	V
Gate-to-Source Voltage	$V_{GS}$	$\pm 30$	V
Drain Current(DC)	$I_D$	9	A
Drain Current(Pulse)	$I_{DP}$	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	36
Allowable Power Dissipation	$P_D$	2.0	W
		$T_c = 25^\circ C$	40
Channel Temperature	$T_{ch}$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

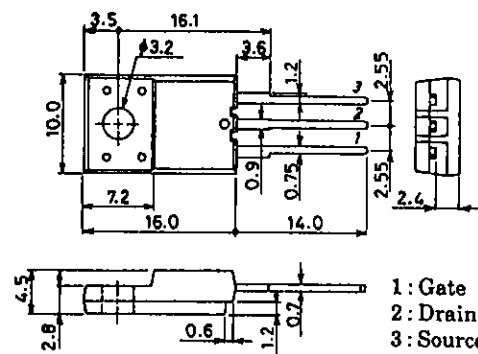
**Electrical Characteristics at Ta = 25°C**

			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	$I_{GSS}$	$V_{GS} = \pm 30V, V_{DS} = 0$			$\pm 100$	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	$R_{DS(on)}$	$I_D = 6A, V_{GS} = 10V$	0.47	0.6		$\Omega$
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	$t_{d(on)}$	$I_D = 6A, V_{GS} = 10V$ $V_{DD} = 200V, R_{GS} = 50\Omega$		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**

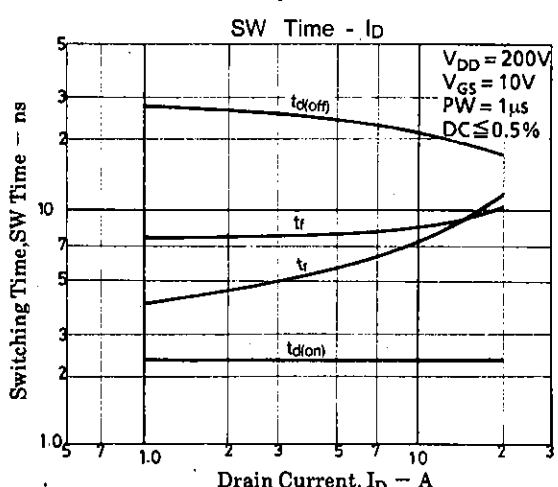
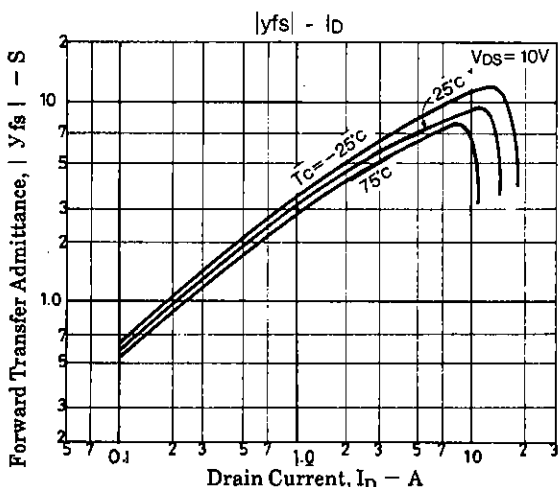
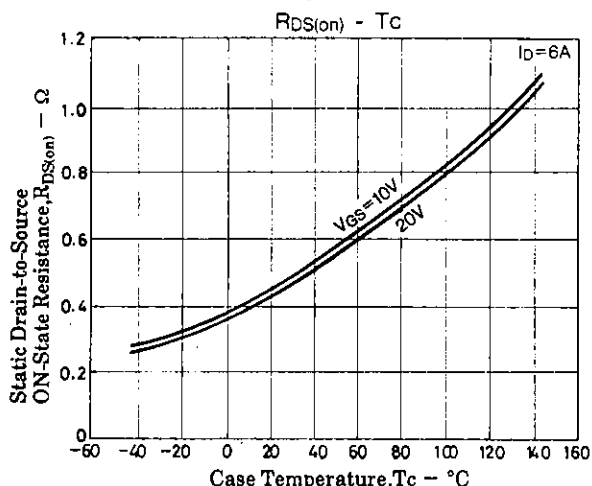
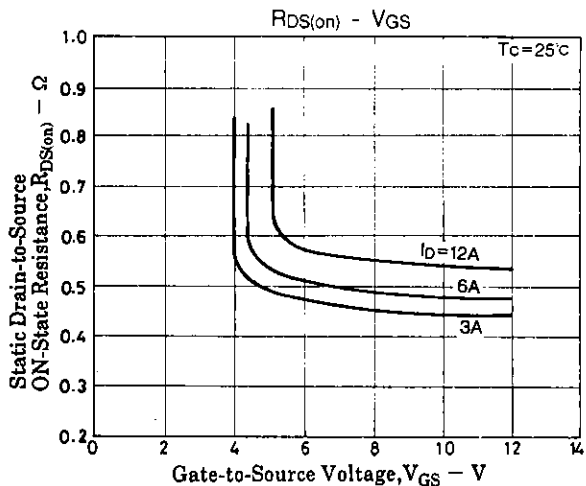
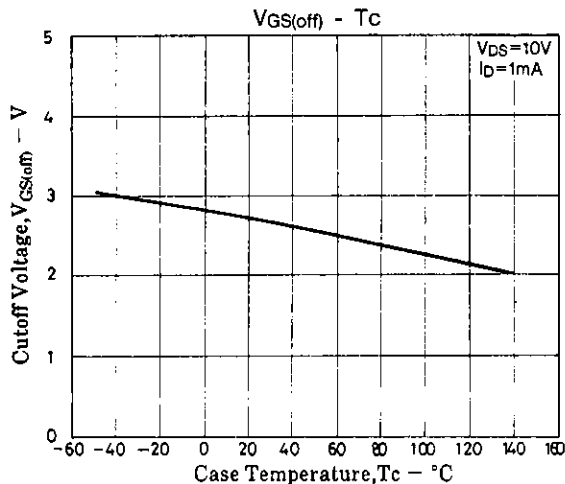
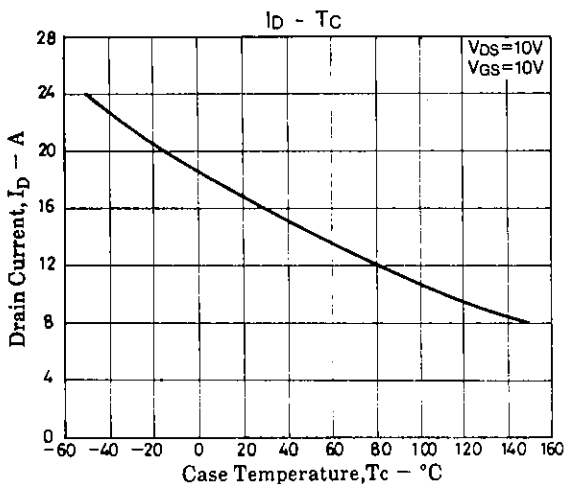
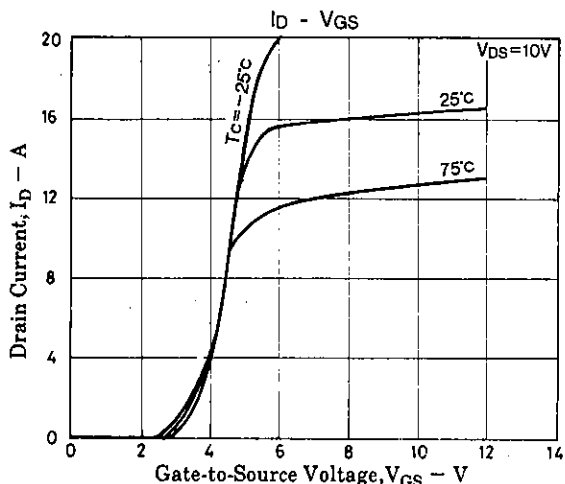
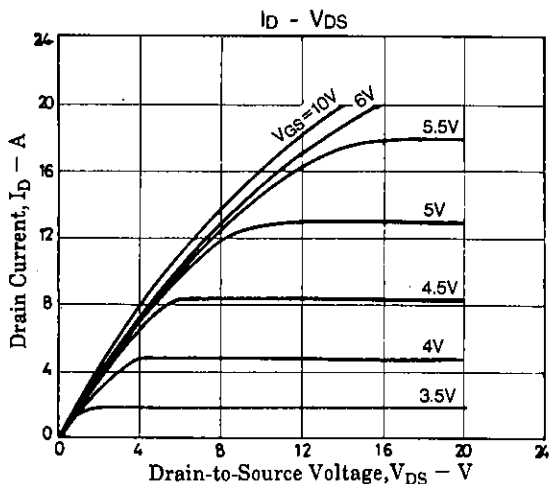
(unit : mm)

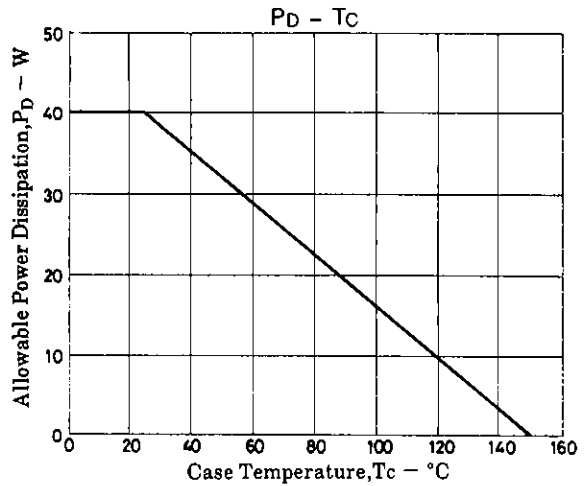
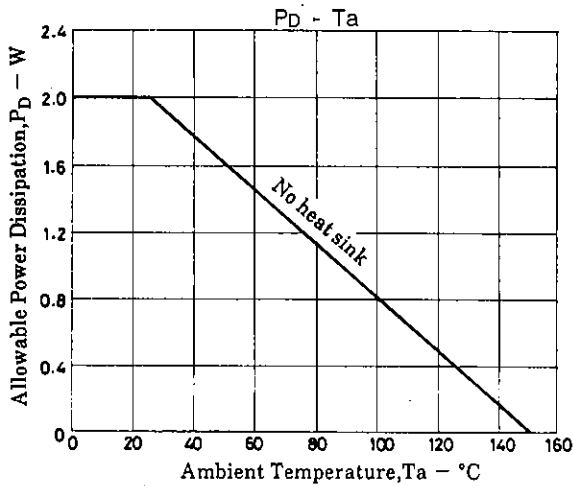
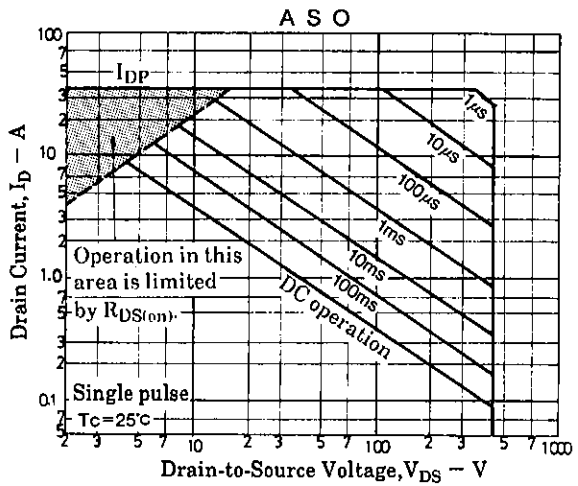
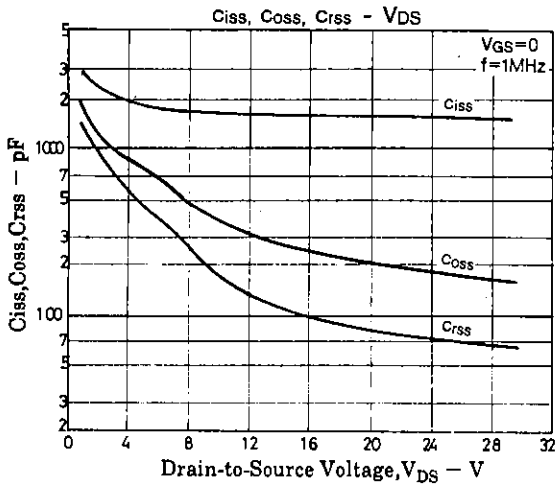


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