

<b>SANYO</b>	No.3448A	<b>2SK1445</b>
		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**

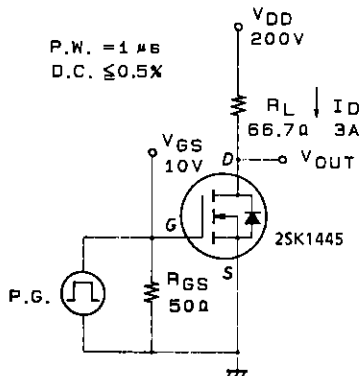
Drain-to-Source Voltage	$V_{DSS}$	450	V	
Gate-to-Source Voltage	$V_{GSS}$	±30	V	
Drain Current(DC)	$I_D$	5	A	
Drain Current(Pulse)	$I_{DP}$	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	20	A
Allowable Power Dissipation	$P_D$	2.0	W	
		$T_c = 25^\circ C$	30	W
Channel Temperature	$T_{ch}$	150	°C	
Storage Temperature	$T_{stg}$	-55 to +150	°C	

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

			min	typ	max	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	$I_{GSS}$	$V_{GS} = \pm 30V, V_{DS} = 0$			±100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	2.0		3.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 3A$	2.0	4.0		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 3A, V_{GS} = 10V$		1.0	1.4	Ω
Input Capacitance	$C_{iss}$	$V_{DS} = 20V, f = 1MHz$		700		pF
Output Capacitance	$C_{oss}$	$V_{DS} = 20V, f = 1MHz$		100		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 20V, f = 1MHz$		40		pF
Turn-ON Delay Time	$t_{d(on)}$	$I_D = 3A, V_{GS} = 10V$ $V_{DD} = 200V, R_{GS} = 50\Omega$		15		ns
Rise Time	$t_r$		30		ns	
Turn-OFF Delay Time	$t_{d(off)}$		130		ns	
Fall Time	$t_f$		45		ns	
Diode Forward Voltage	$V_{SD}$	$I_S = 5A, V_{GS} = 0$			1.8	V

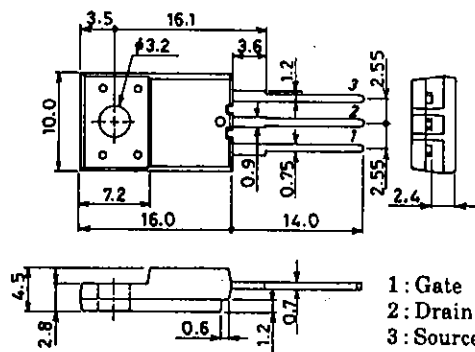
(Note) Be careful in handling the 2SK1445 because it has no protection diode between gate and source.

**Switching Time Test Circuit**



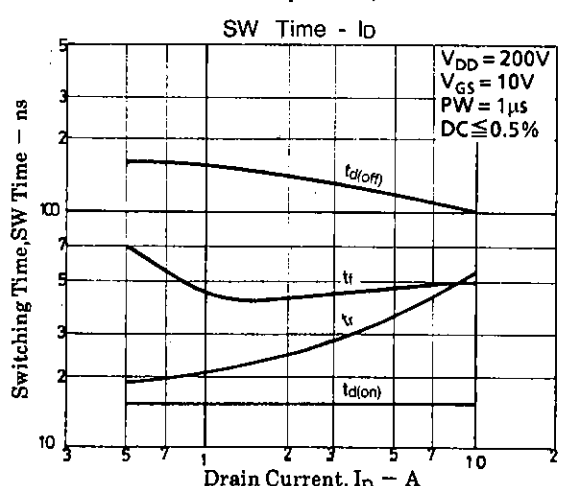
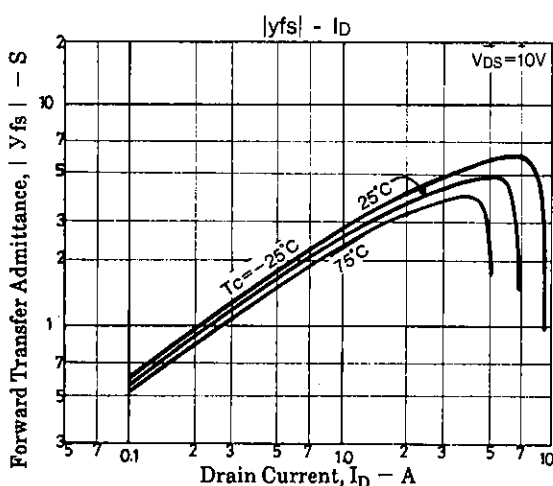
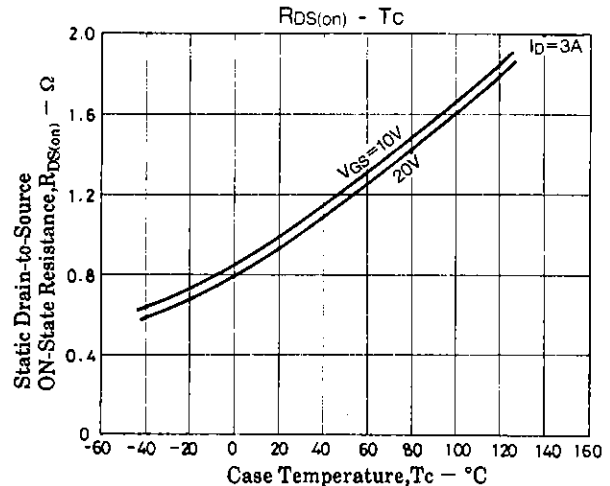
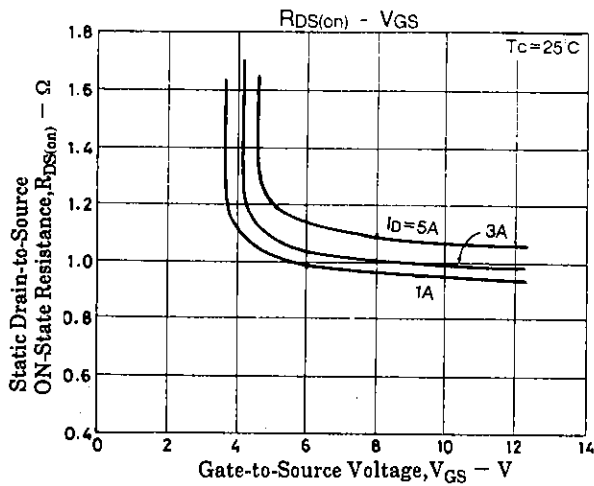
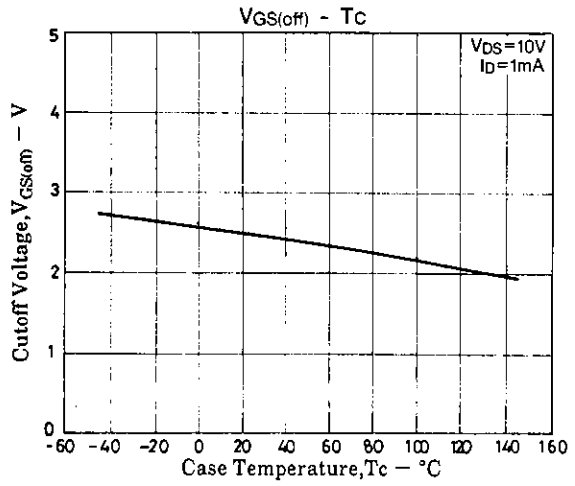
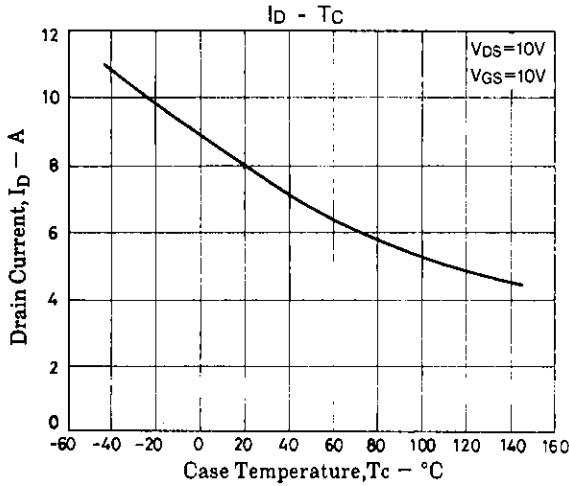
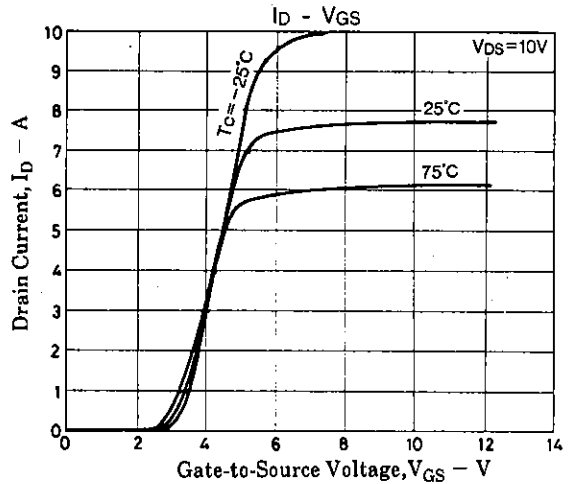
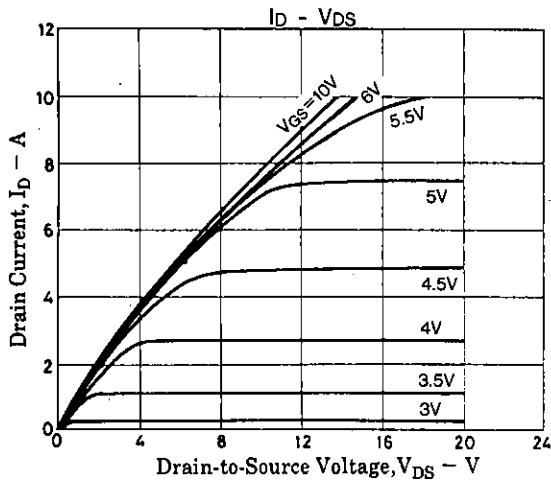
**Package Dimensions 2078B**

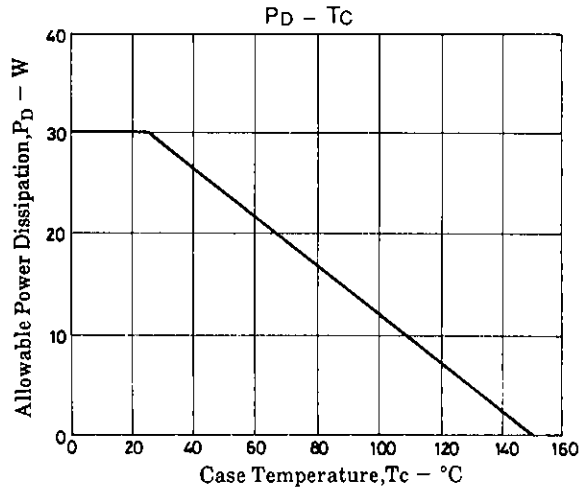
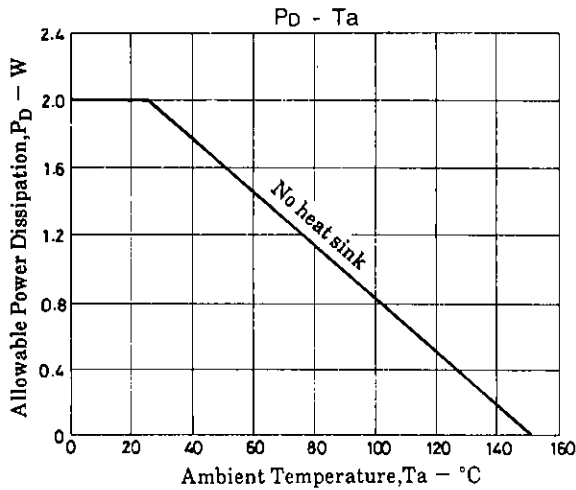
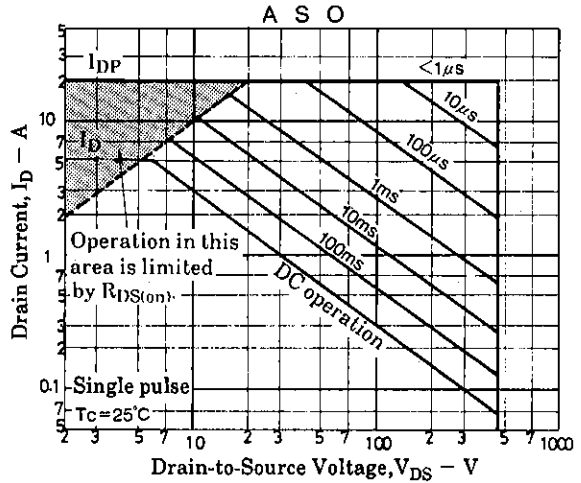
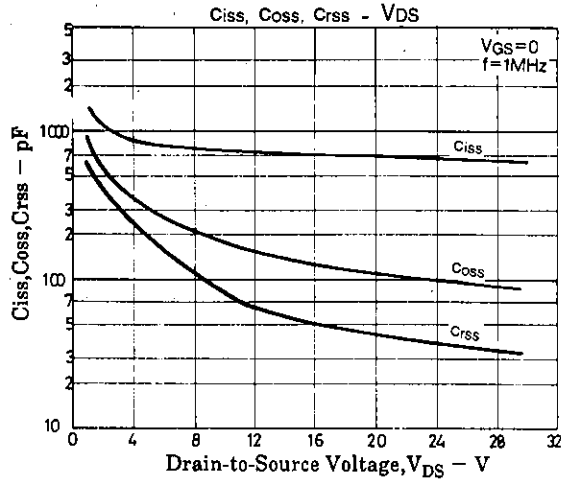
(unit : mm)



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