

**SANYO**

No.3440

**2SK1053**

N-Channel MOS Silicon FET

Very High-Speed  
Switching Applications**Features**

- Low ON-state resistance.
- Very high-speed switching.

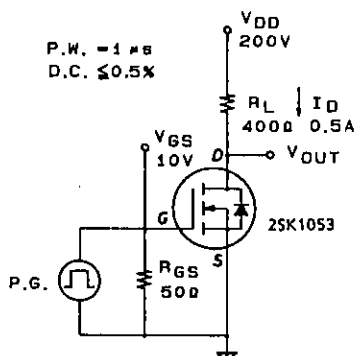
**Absolute Maximum Ratings at Ta = 25°C**

			unit
Drain to Source Voltage	$V_{DSS}$	450	V
Gate to Source Voltage	$V_{GSS}$	$\pm 30$	V
Drain Current(DC)	$I_D$	1.0	A
Drain Current(Pulse)	$I_{DP}$	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	A
Allowable Power Dissipation	$P_D$	$T_c = 25^\circ C$	40 W
		1.75	W
Channel Temperature	$T_{ch}$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

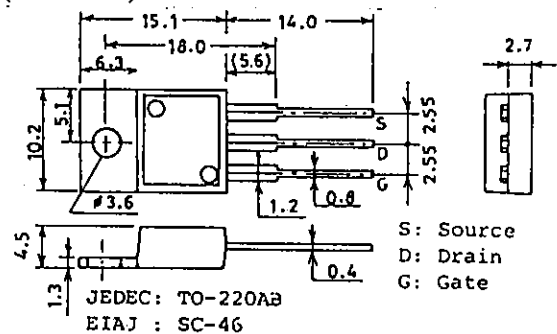
**Electrical Characteristics at Ta = 25°C**

			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} $	$V_{DS} = 10V, I_D = 0.5A$	0.6	1.2		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 0.5A, V_{GS} = 10V$		3.5	4.5	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = 20V, f = 1MHz$		250		pF
Output Capacitance	$C_{oss}$	$V_{DS} = 20V, f = 1MHz$		40		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 20V, f = 1MHz$		8.0		pF
Turn-ON Delay Time	$t_{d(on)}$	$I_D = 0.5A, V_{GS} = 10V$ $V_{DD} = 200V, R_{GS} = 50\Omega$		10		ns
Rise Time	$t_r$		9		ns	
Turn-OFF Delay Time	$t_{d(off)}$		45		ns	
Fall Time	$t_f$		50		ns	
Diode Forward Voltage	$V_{SD}$	$I_S = 1.0A, V_{GS} = 0$			1.8	V

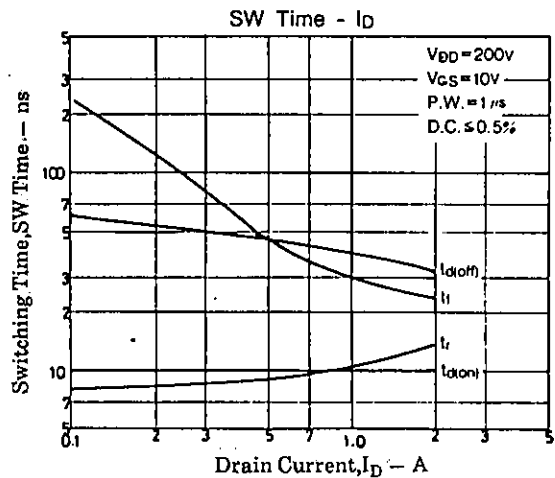
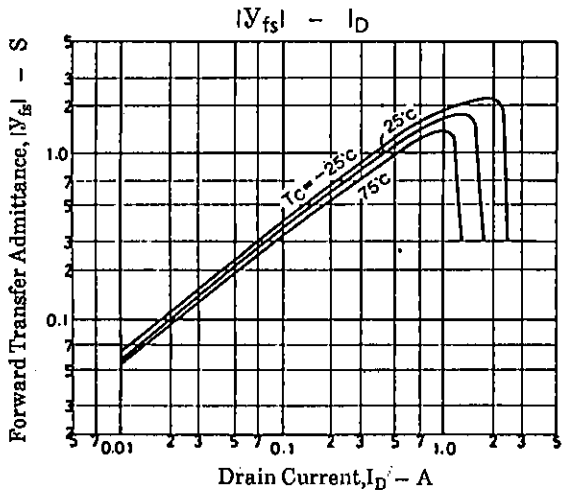
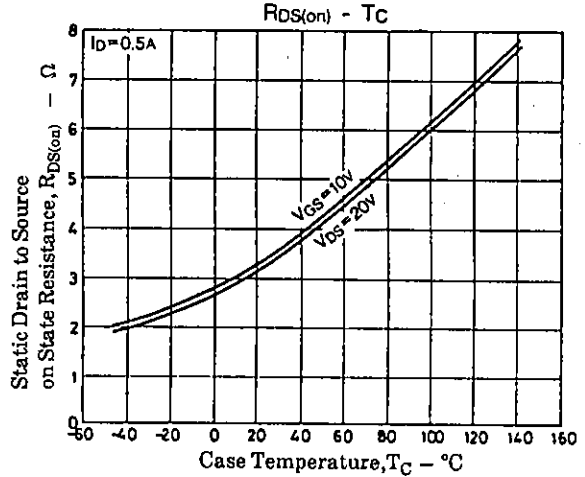
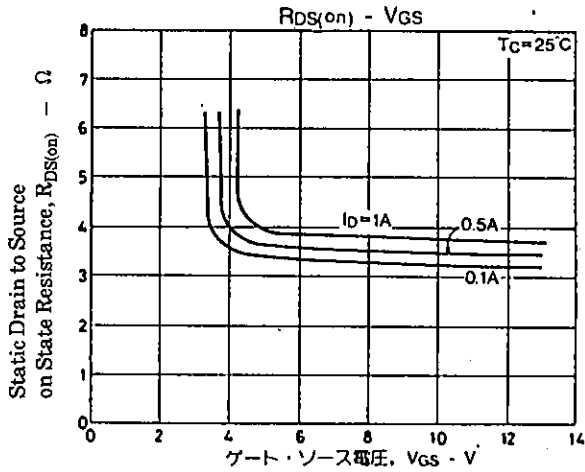
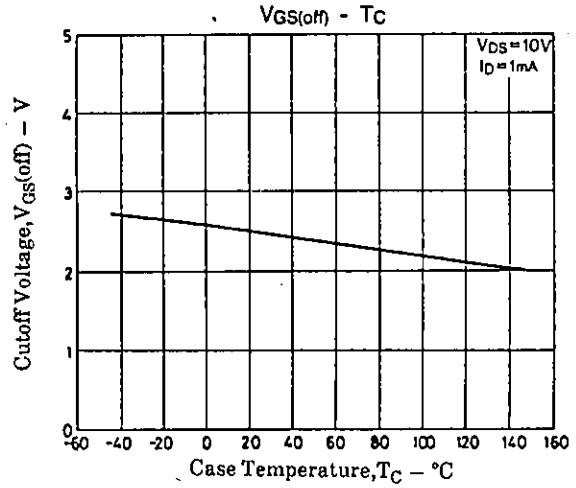
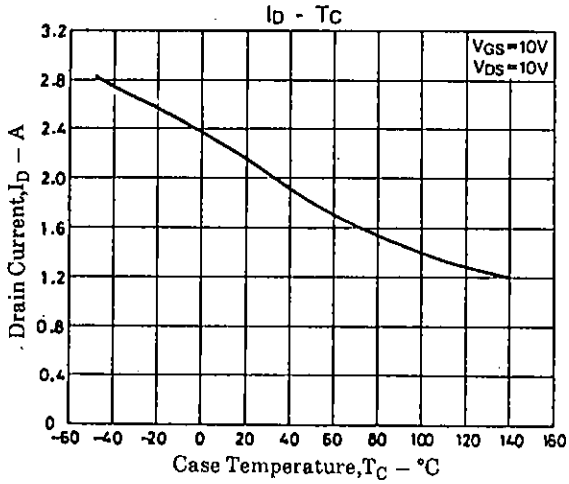
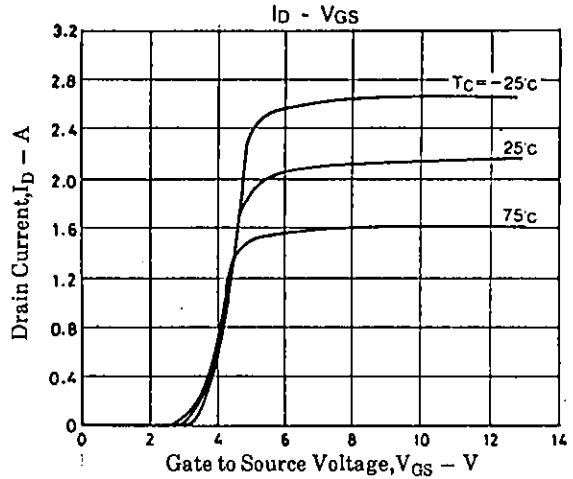
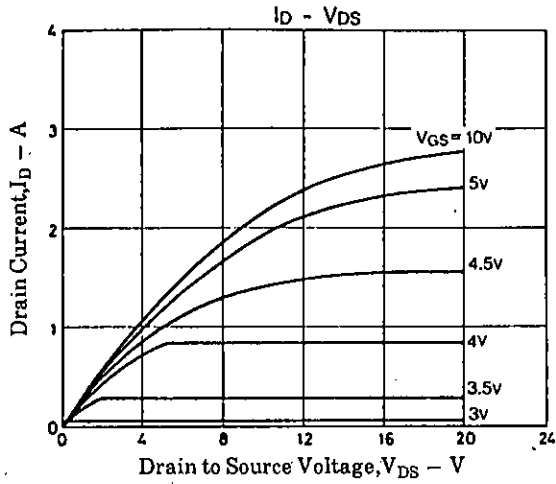
(Note) Be careful in handling the 2SK1053 because it has no protection diode between gate and source.

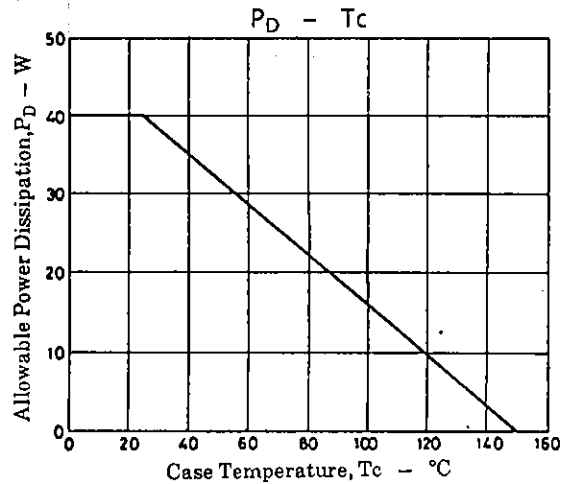
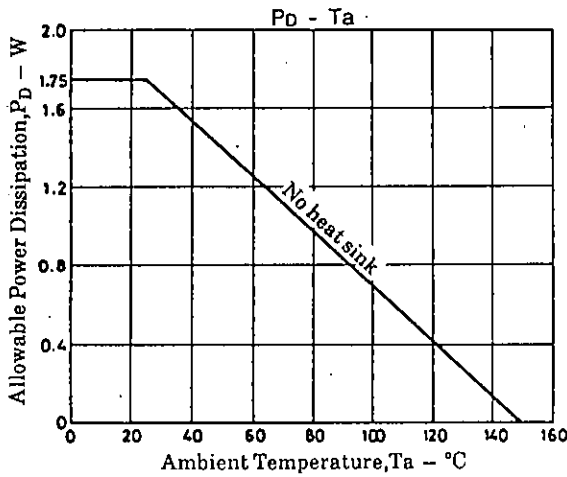
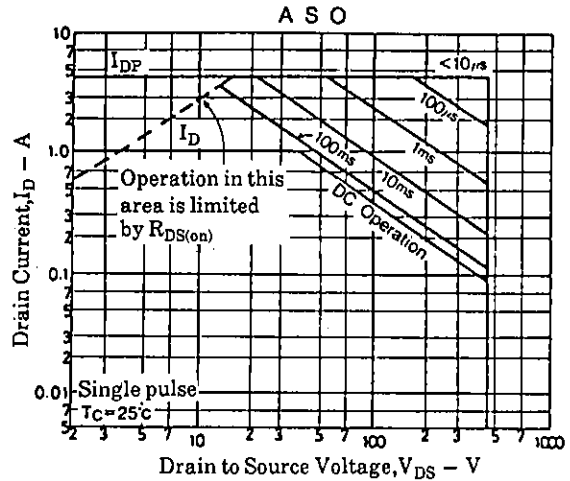
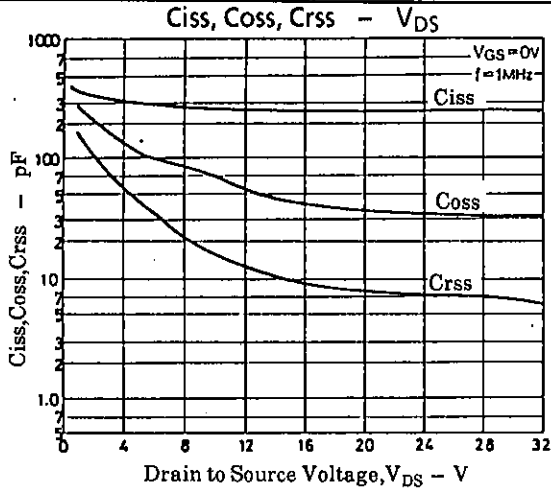
**Switching Time Test Circuit****Package Dimensions 2052B**

(unit: mm)



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