

SANYO

No.3439

2SK1052

N-Channel MOS Silicon FET

Very High-Speed
Switching Applications**Features**

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

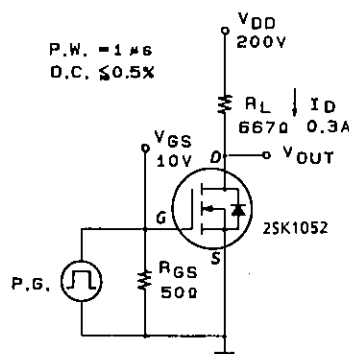
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

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		0.5	A
Drain Current(Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	2.0	A
Allowable Power Dissipation	P _D	Tc=25°C	30	W
			1.75	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

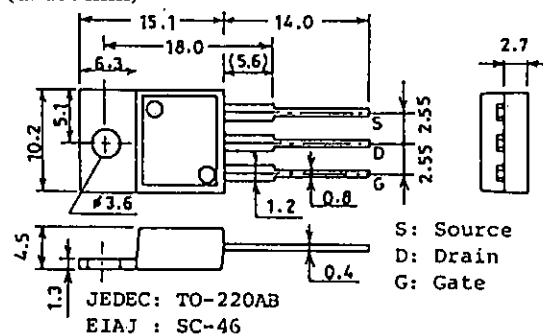
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}$, $V_{GS} = 0$	450			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 450\text{V}$, $V_{GS} = 0$			1.0	mA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 30\text{V}$, $V_{DS} = 0$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$, $I_D = 1\text{mA}$	2.0		3.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 0.3\text{A}$	0.4	0.8		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 0.3\text{A}$, $V_{GS} = 10\text{V}$		5.5	7.0	Ω
Input Capacitance	C_{iss}	$V_{DS} = 20\text{V}$, $f = 1\text{MHz}$		160		pF
Output Capacitance	C_{oss}	$V_{DS} = 20\text{V}$, $f = 1\text{MHz}$		25		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20\text{V}$, $f = 1\text{MHz}$		5.0		pF
Turn-ON Delay Time	$t_{d(on)}$	$I_D = 0.3\text{A}$, $V_{GS} = 10\text{V}$ $V_{DD} = 200\text{V}$, $R_{GS} = 50\Omega$		10		ns
Rise Time	t_r			8		ns
Turn-OFF Delay Time	$t_{d(off)}$			30		ns
Fall Time	t_f			70		ns
Diode Forward Voltage	V_{SD}	$I_S = 0.5\text{A}$, $V_{GS} = 0$			1.8	V

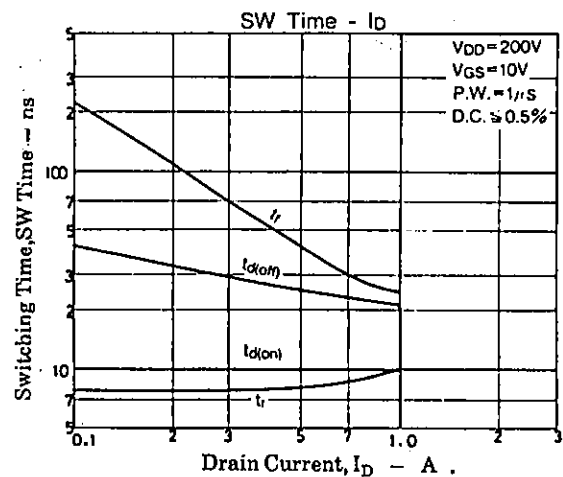
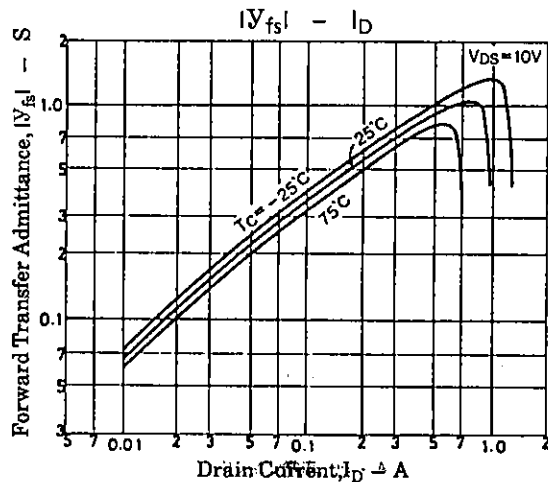
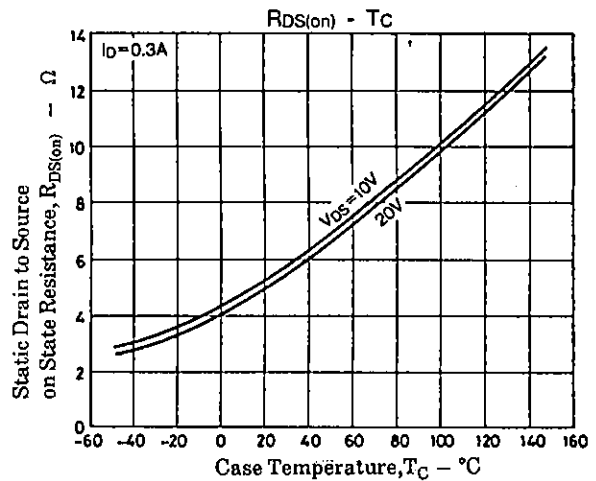
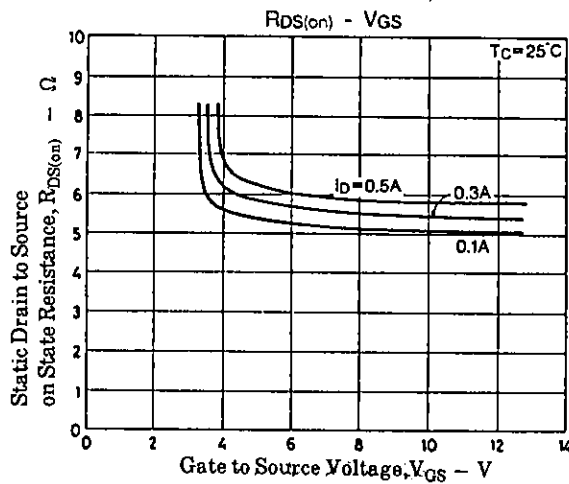
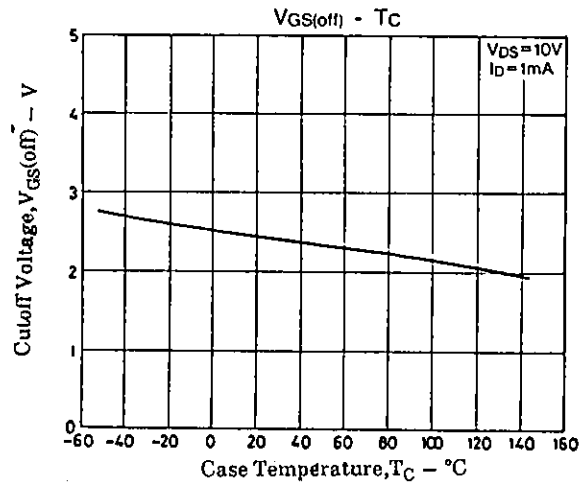
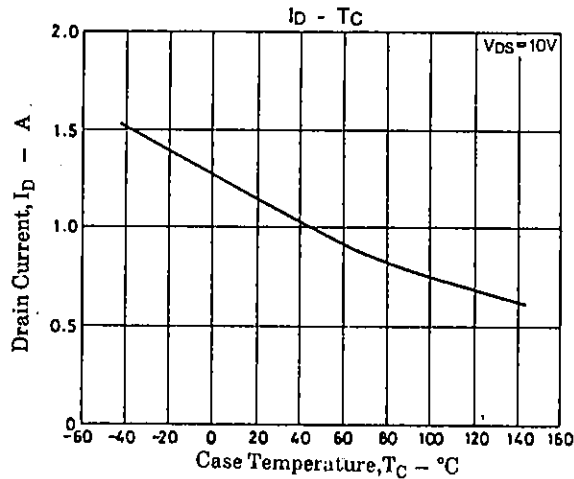
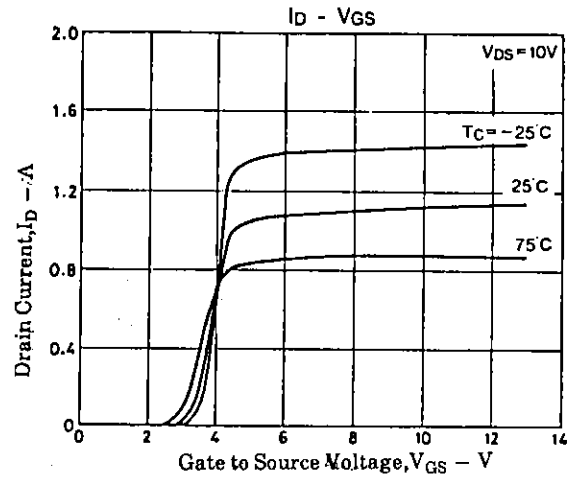
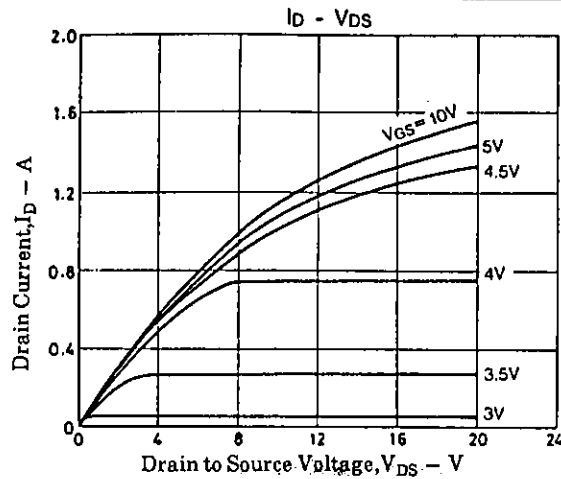
(Note) Be careful in handling the 2SK1052 because it has no protection diode between gate and source.

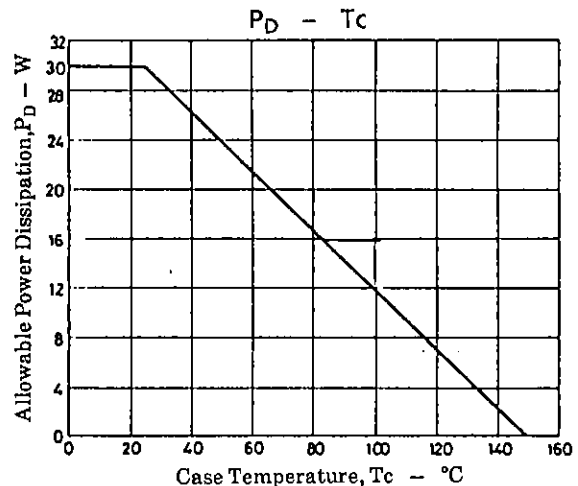
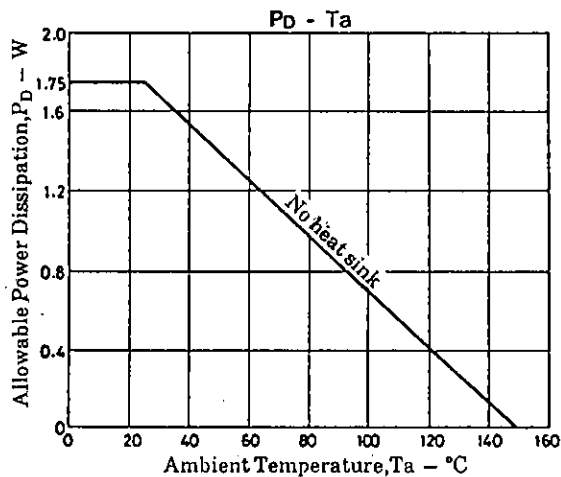
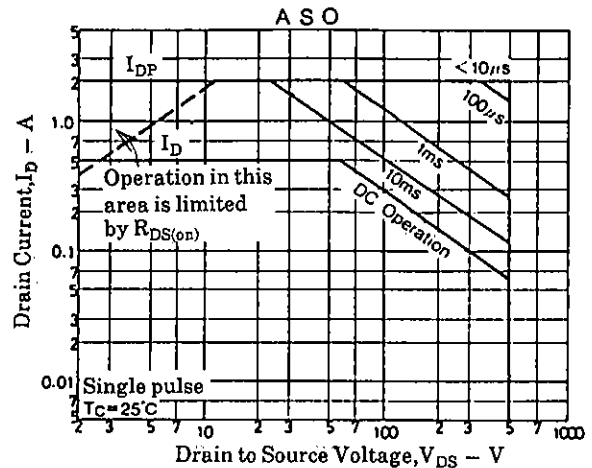
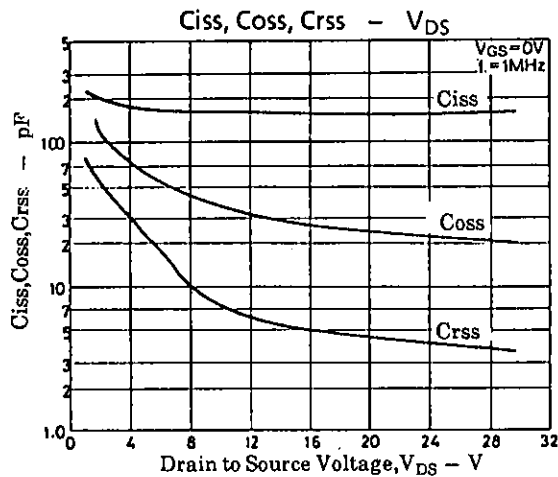
Switching Time Test Circuit**Package Dimensions 2052B**

(unit : mm)



SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN





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