

<b>SANYO</b>	No. 3454	<b>2SK1451</b>
		N-Channel MOS Silicon FET Very High-Speed Switching Applications

**Features**

- Low ON-state resistance.
- Very high-speed switching.
- Converters.
- Micaless package facilitating 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)	$I_D$	8	A
Drain Current(Pulse)	$I_{DP}$	32	A
Allowable Power Dissipation	$P_D$	50	W
		3.0	W
Channel Temperature	$T_{ch}$	150	°C
Storage Temperature	$T_{stg}$	- 55 to + 150	°C

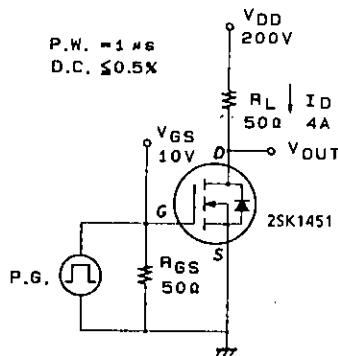
$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$   
 $T_c = 25^\circ C$

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

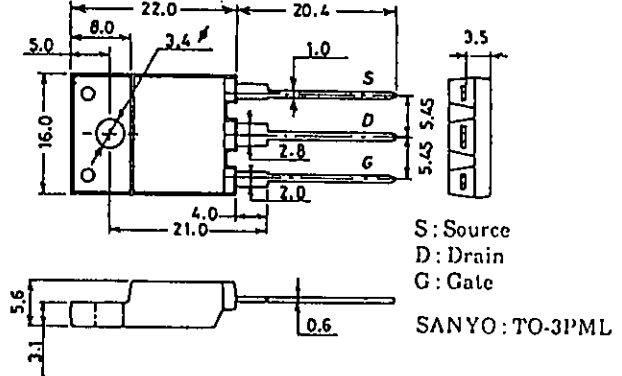
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	450			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 450V, V_{GS} = 0$			1.0	mA
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 30V, V_{DS} = 0$			±100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	2.0		3.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 4A$	3.0	6.0		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 4A, V_{GS} = 10V$		0.6	0.8	Ω
Input Capacitance	$C_{iss}$	$V_{DS} = 20V, f = 1MHz$		1200		pF
Output Capacitance	$C_{oss}$	$V_{DS} = 20V, f = 1MHz$		180		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 20V, f = 1MHz$		70		pF
Turn-ON Delay Time	$t_{d(on)}$	$I_D = 4A, V_{GS} = 10V$ $V_{DD} = 200V, R_{GS} = 50\Omega$		20		ns
Rise Time	$t_r$		40	ns		
Turn-OFF Delay Time	$t_{d(off)}$		160	ns		
Fall Time	$t_f$		60	ns		
Diode Forward Voltage	$V_{SD}$	$I_S = 8A, V_{GS} = 0$			1.8	V

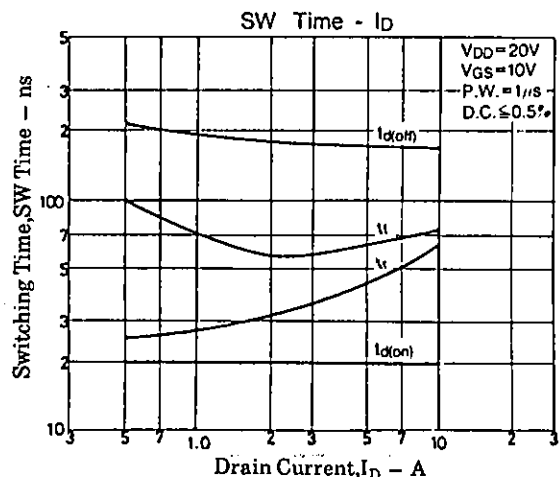
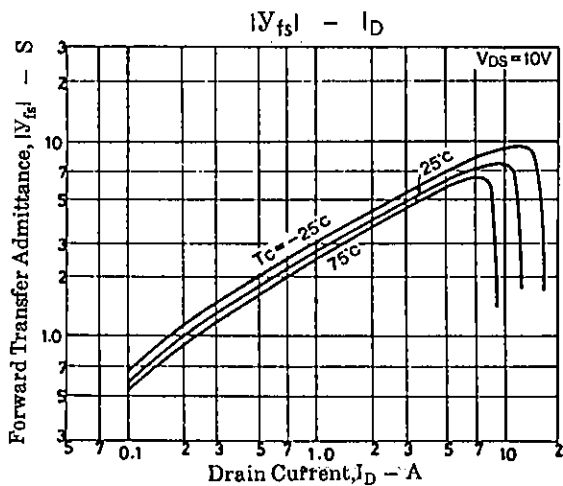
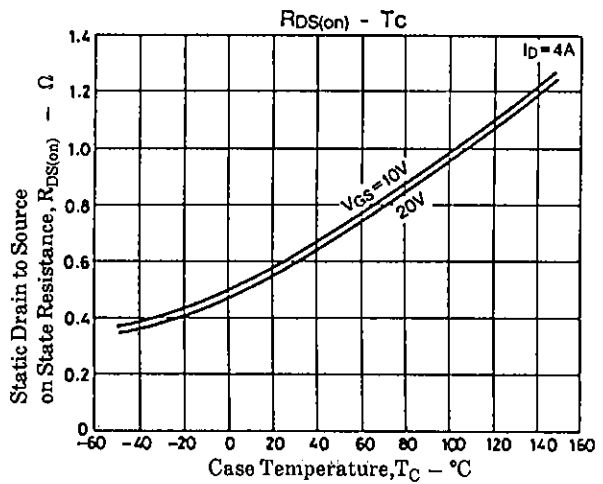
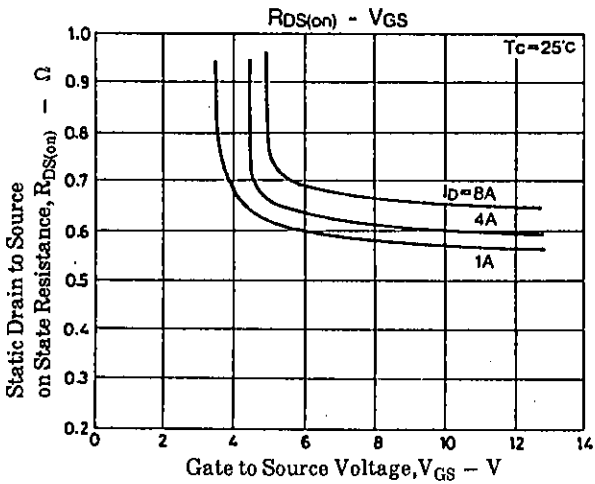
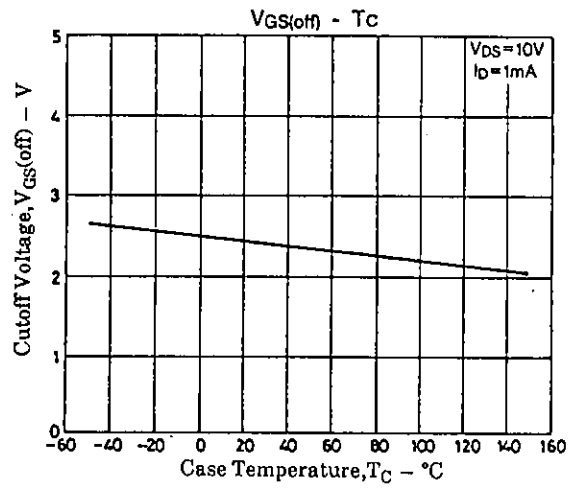
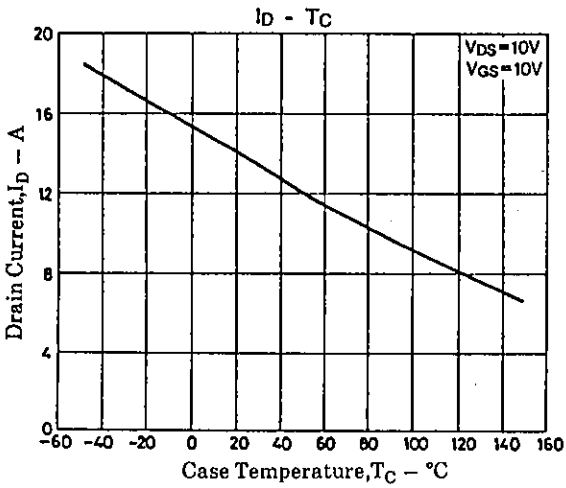
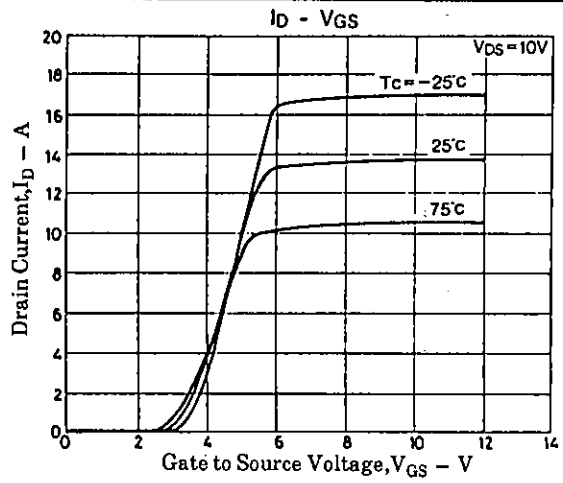
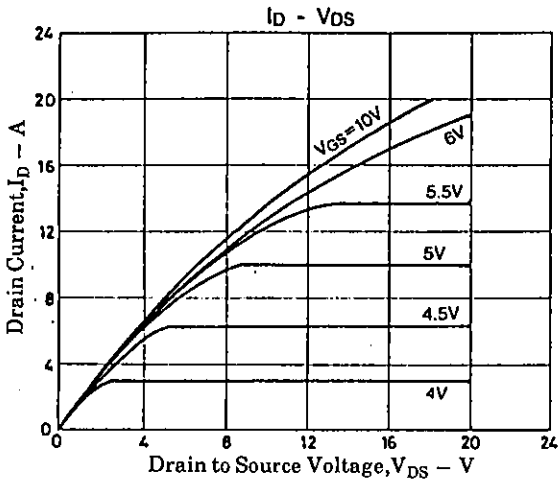
(Note) Be careful in handling the 2SK1451 because it has no protection diode between gate and source.

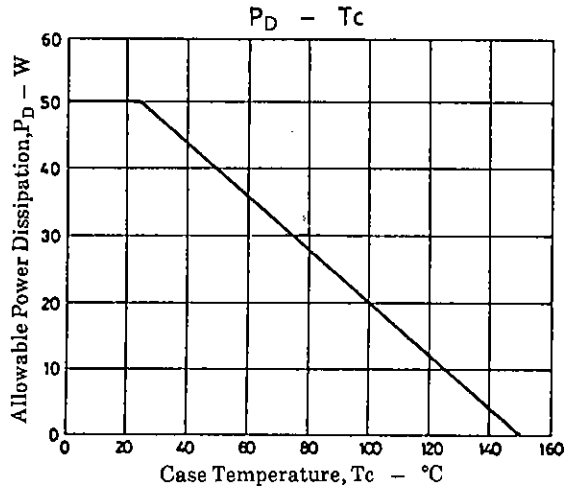
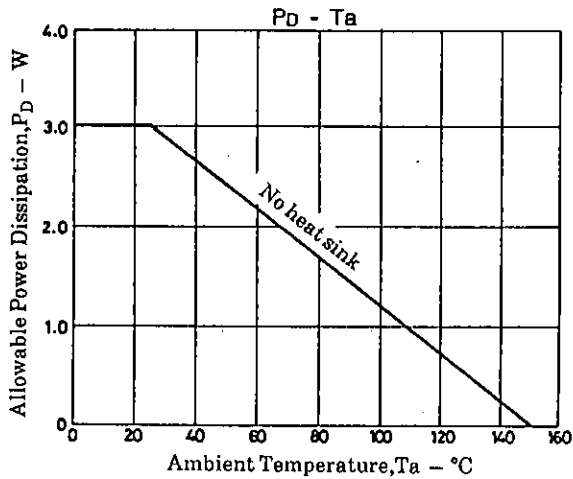
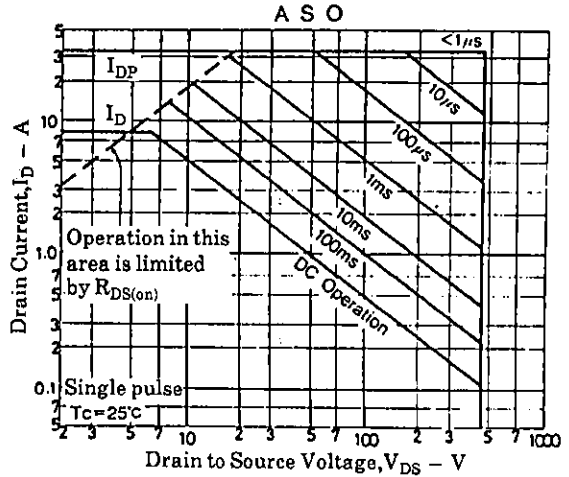
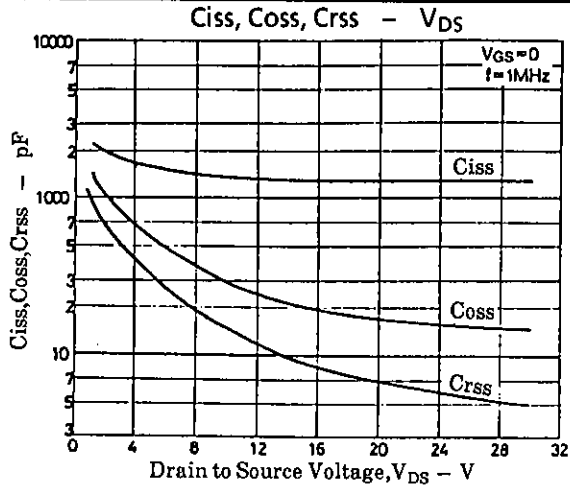
**Switching Time Test Circuit**



**Package Dimensions 2076**  
(unit : mm)







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