

<b>SANYO</b>	No.4230	<b>2SK1414</b>
		N-Channel MOS Silicon FET High-Voltage High-Speed Switching Applications

**Features**

- Low ON resistance, low input capacitance, very high-speed switching.
- High reliability (Adoption of HVP process).

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

			unit
Drain to Source Voltage	$V_{DSS}$	1500	V
Gate to Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current(DC)	$I_D$	6	A
Drain Current(Pulse)	$I_{DP}$	12	A
Allowable Power Dissipation	$P_D$	3.5	W
		200	W
Channel Temperature	$T_{ch}$	150	°C
Storage Temperature	$T_{stg}$	-55 to +150	°C

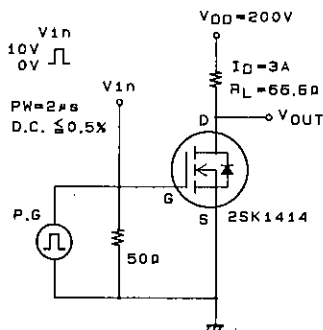
$T_c = 25^\circ\text{C}$

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

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}, V_{GS} = 0$	1500			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 1200\text{V}, V_{GS} = 0$			100	$\mu\text{A}$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 20\text{V}, V_{DS} = 0$			$\pm 100$	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$	1.5		3.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 20\text{V}, I_D = 3\text{A}$	1.0	3.0		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 3\text{A}, V_{GS} = 10\text{V}$		2.5	3.5	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = 20\text{V}, f = 1\text{MHz}$		1100		pF
Output Capacitance	$C_{oss}$	$V_{DS} = 20\text{V}, f = 1\text{MHz}$		350		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 20\text{V}, f = 1\text{MHz}$		150		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		25		ns
Rise Time	$t_r$	"		85		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		155		ns
Fall Time	$t_f$	"		95		ns
Diode Forward Voltage	$V_{SD}$	$I_S = 6\text{A}, V_{GS} = 0$		1.0	1.5	V

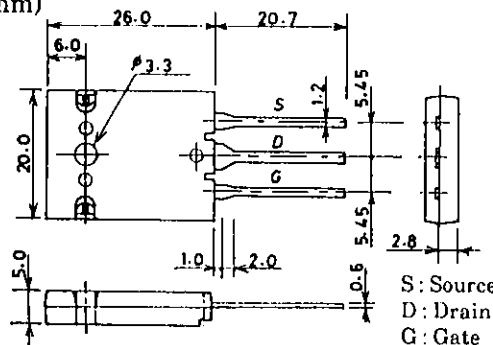
(Note) Be careful in handling the 2SK1414 because it has no protection diode between gate and source.

**Switching Time Test Circuit**



**Package Dimensions 2077**

(unit : mm)



S : Source  
D : Drain  
G : Gate

SANYO : TO-3PBL

