

SANYO	No.4229	2SK1413
		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).
- Micaless package facilitating mounting.

Absolute Maximum Ratings at Ta = 25°C

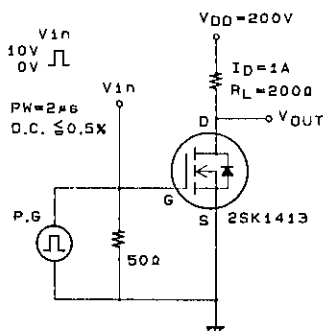
			unit
Drain to Source Voltage	V_{DS}	1500	V
Gate to Source Voltage	V_{GS}	± 20	V
Drain Current(DC)	I_D	2	A
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	A
Allowable Power Dissipation	P_D	$T_c = 25^\circ C$	3.0 W
			60 W
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature	T_{stg}	- 55 to + 150	$^\circ C$

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	1500			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 1200V, V_{GS} = 0$			100	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	1.5		3.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 20V, I_D = 1A$	1.0	1.5		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 1A, V_{GS} = 10V$		8.0	11.0	Ω
Input Capacitance	C_{iss}	$V_{DS} = 20V, f = 1MHz$		550		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V, f = 1MHz$		90		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V, f = 1MHz$		30		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		14		ns
Rise Time	t_r	"		16		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		160		ns
Fall Time	t_f	"		40		ns
Diode Forward Voltage	V_{SD}	$I_S = 2A, V_{GS} = 0$		1.0	1.5	V

(Note) Be careful in handling the 2SK1413 because it has no protection diode between gate and source.

Switching Time Test Circuit



Package Dimensions 2076

