

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

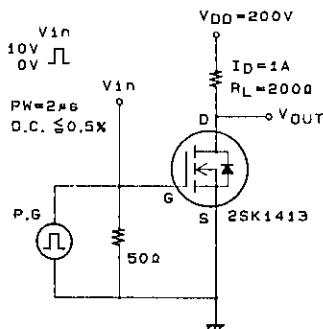
			unit
Drain to Source Voltage	V _{DS}	1500	V
Gate to Source Voltage	V _{GS}	±20	V
Drain Current(DC)	I _D	2	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	4 A
Allowable Power Dissipation	P _D	T _c = 25°C	3.0 W
			60 W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 to +150	°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} = ±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

