



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

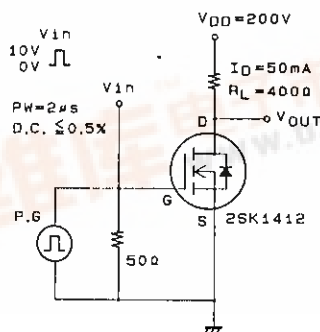
Parameter	Symbol	Value	unit	
Drain to Source Voltage	V _{DS}	1500	V	
Gate to Source Voltage	V _{GSS}	±20	V	
Drain Current(DC)	I _D	0.1	A	
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	A	
Allowable Power Dissipation	P _D	2.0	W	
		T _C = 25°C	20	W
Channel Temperature	T _{ch}	150	°C	
Storage Temperature	T _{stg}	-55 to +150	°C	

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	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 = 50mA	50	100		mS
Static Drain to Source on State Resistance	R _{DS(on)}	I _D = 50mA, V _{GS} = 10V		140	200	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		40		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		12		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		3.0		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		15		ns
Rise Time	t _r	∕		25		ns
Turn-OFF Delay Time	t _{d(off)}	∕		50		ns
Fall Time	t _f	∕		350		ns
Diode Forward Voltage	V _{SD}	I _S = 0.1A, V _{GS} = 0		1.0	1.5	V

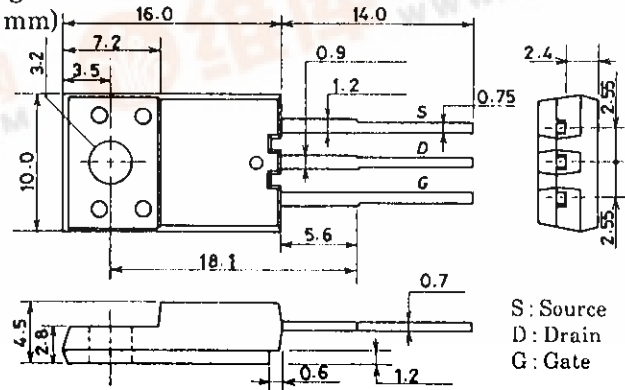
(Note) Be careful in handling the 2SK1412 because it has no protection diode between gate and source.

Switching Time Test Circuit



Package Dimensions 2078

(unit: mm)

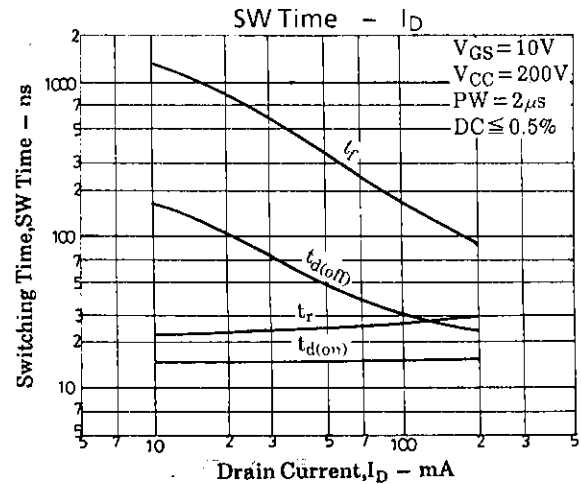
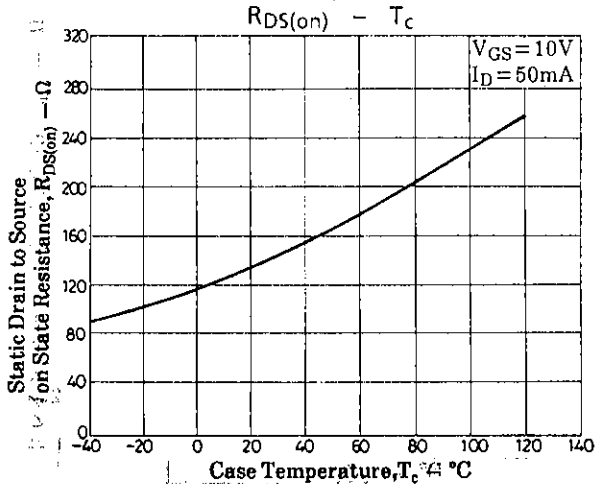
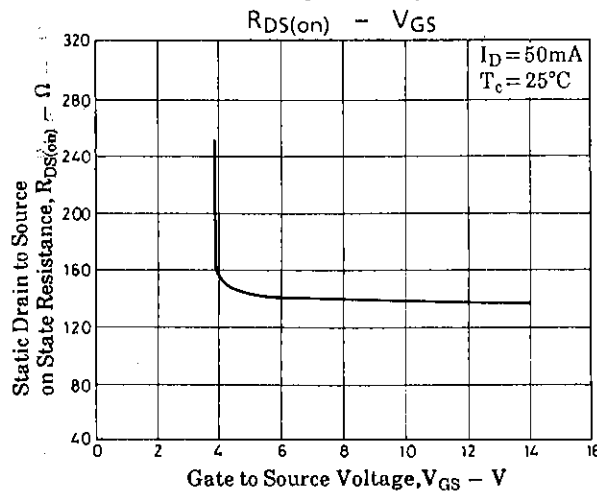
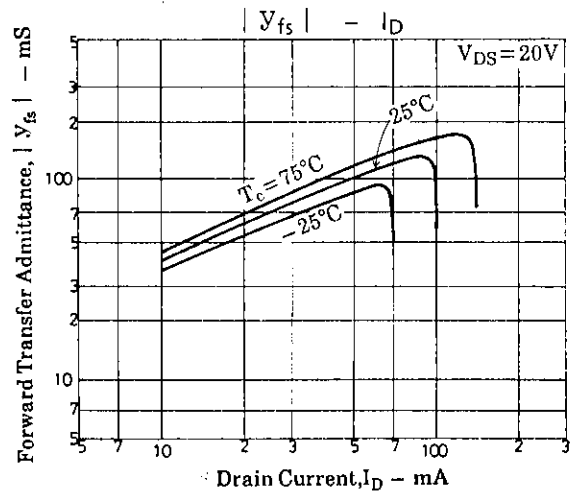
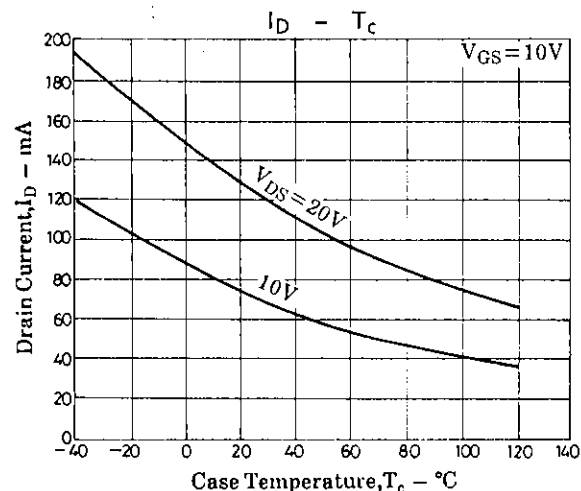
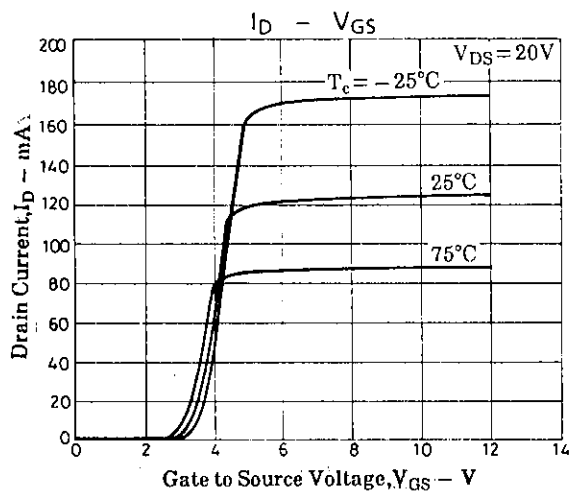
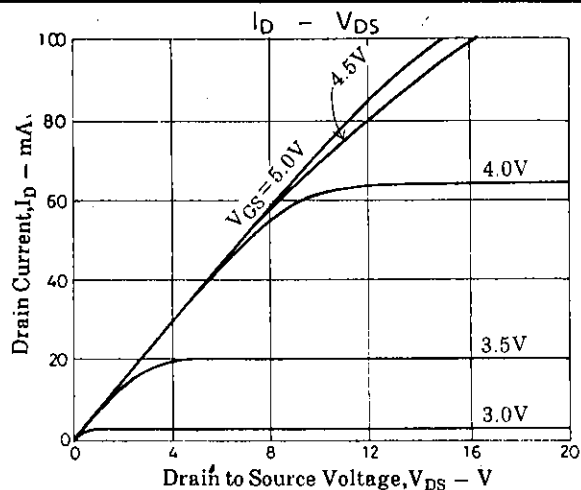
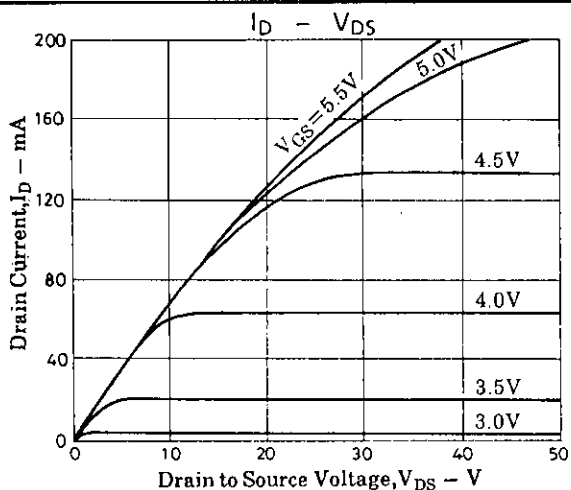


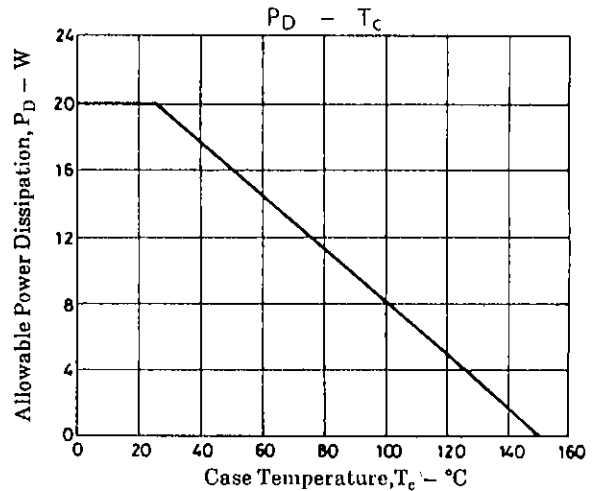
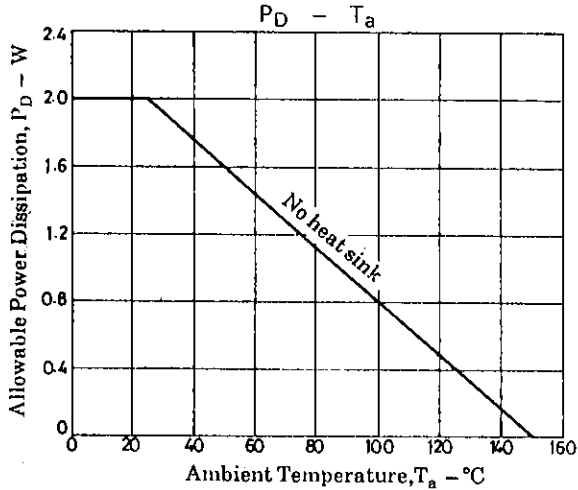
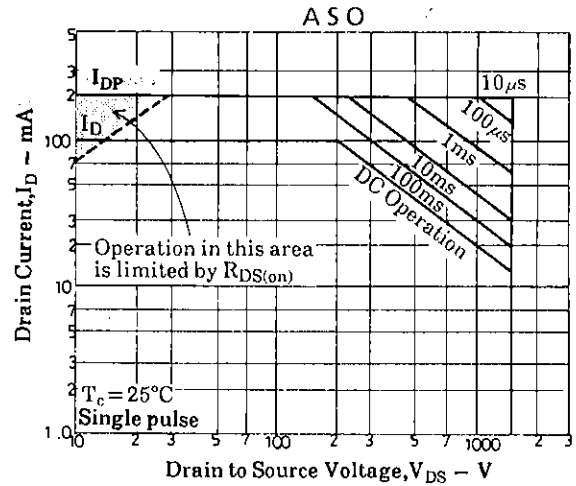
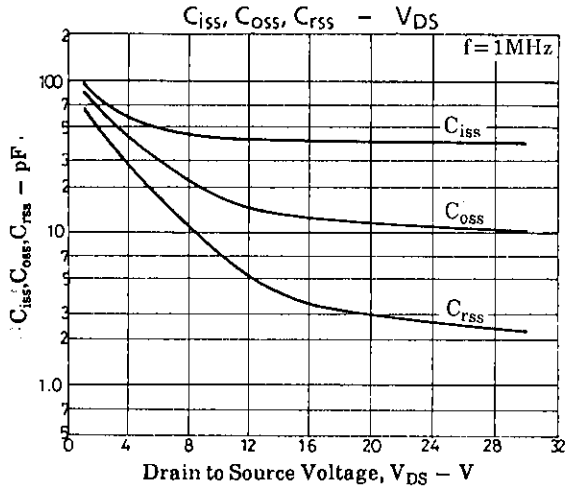
S: Source
D: Drain
G: Gate

SANYO: TO-220FI



2SK1412





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