

<b>SANYO</b>	No.4228	<b>2SK1412</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).
- Micaless package facilitating mounting.

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

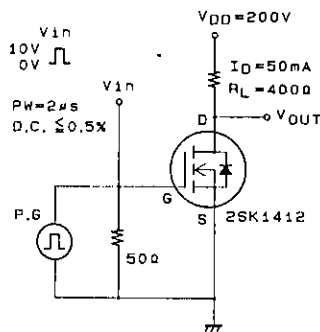
			unit
Drain to Source Voltage	$V_{DSS}$	1500	V
Gate to Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current(DC)	$I_D$	0.1	A
Drain Current(Pulse)	$I_{DP}$	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	A
Allowable Power Dissipation	$P_D$	2.0	W
		$T_c = 25^\circ C$	20
Channel Temperature	$T_{ch}$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

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

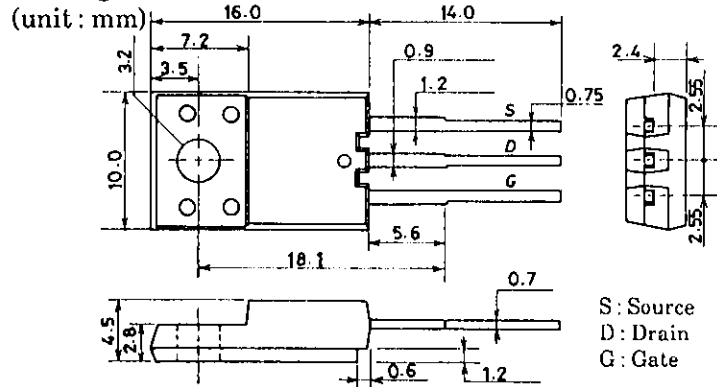
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	1500			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 1200V, V_{GS} = 0$			100	$\mu A$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0$			$\pm 100$	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	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	$\Omega$
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**

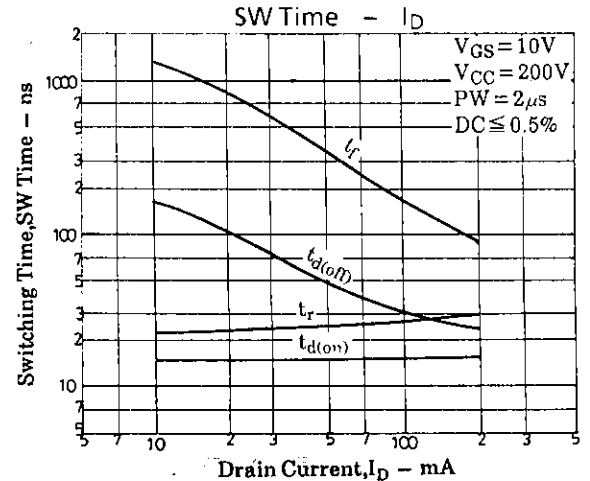
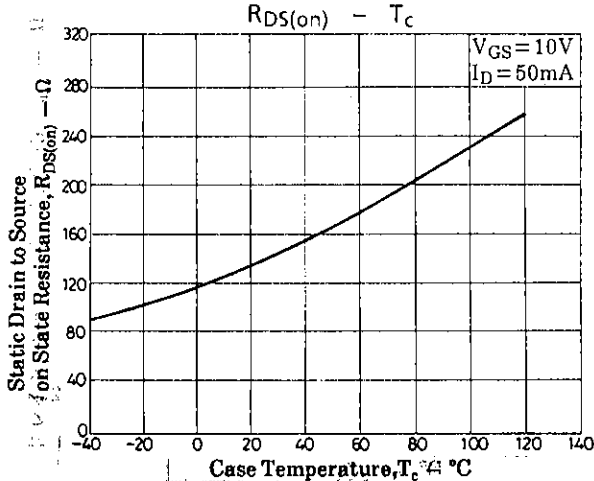
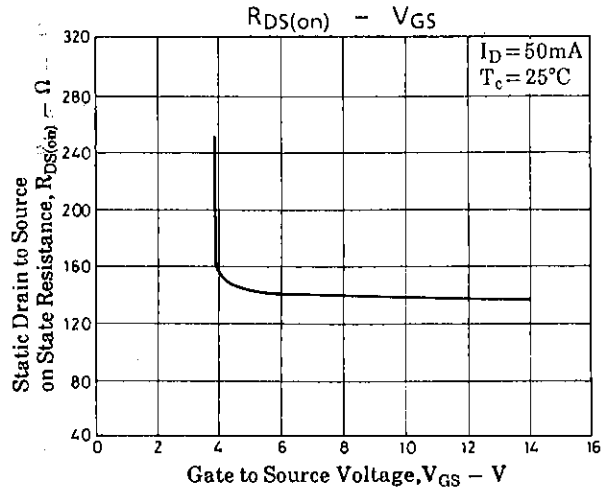
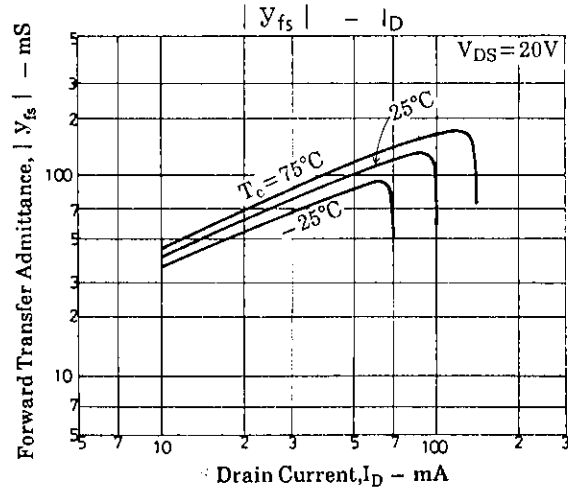
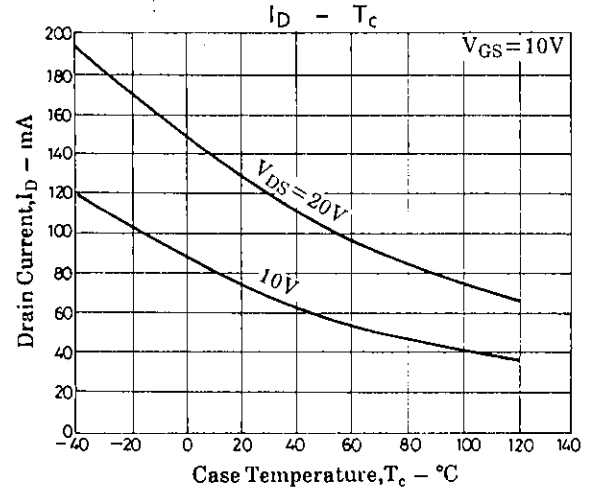
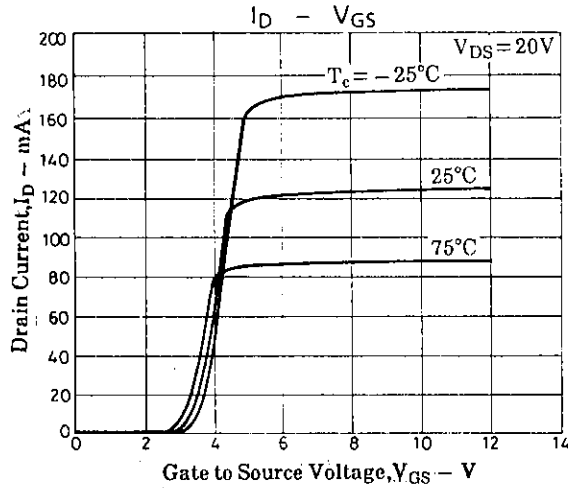
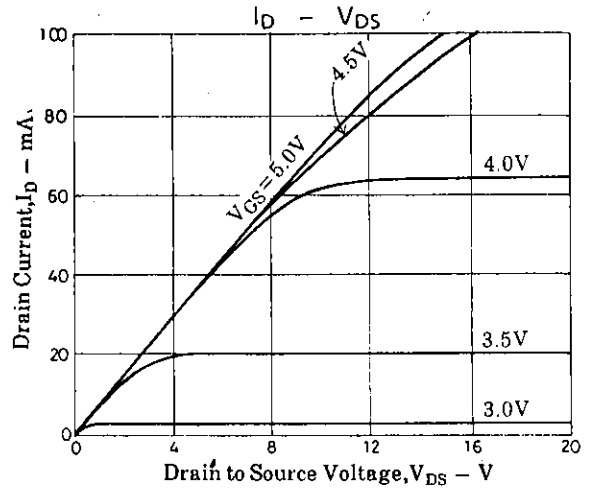
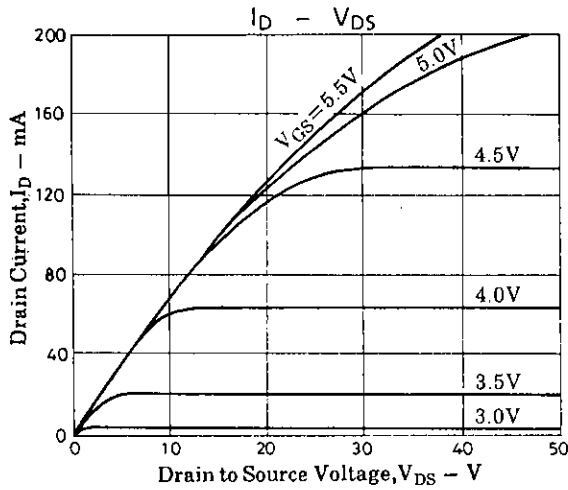


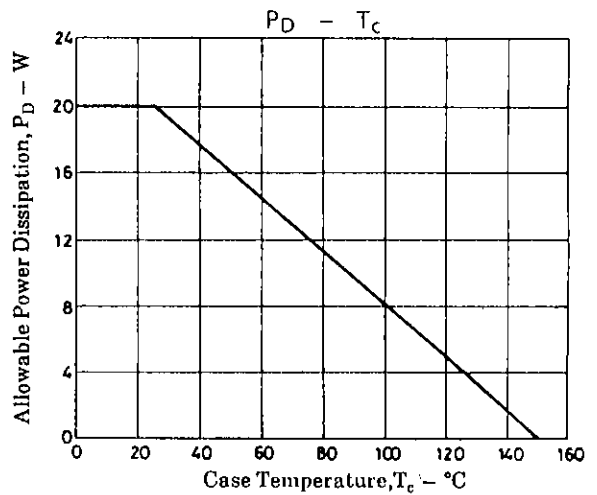
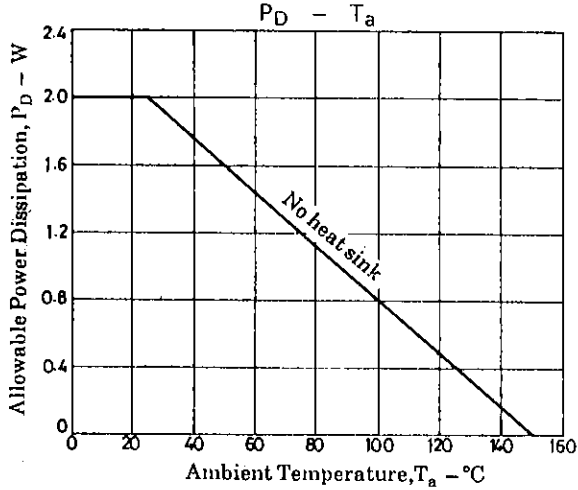
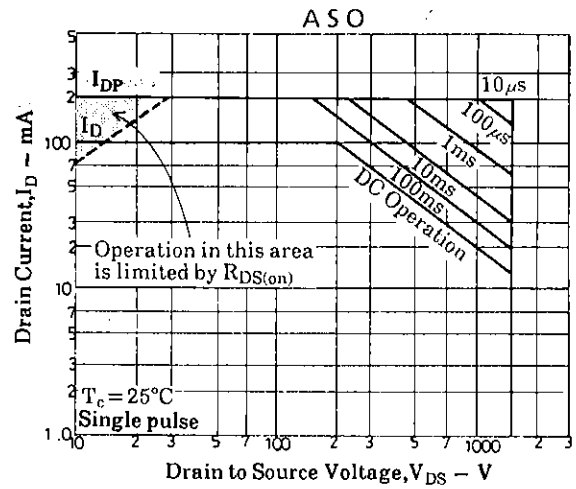
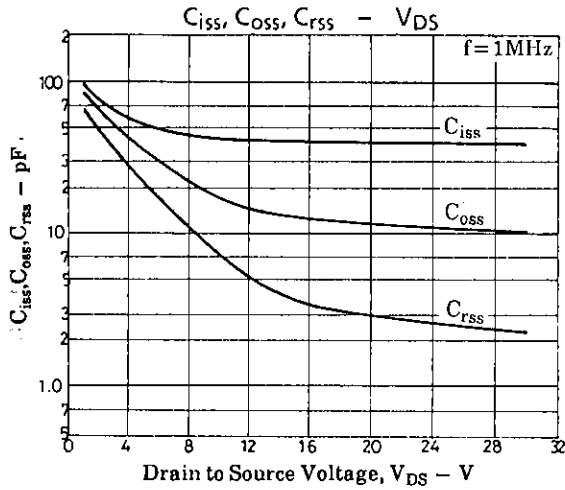
**Package Dimensions 2078**



S: Source  
D: Drain  
G: Gate

SANYO: TO-220FI





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