

<b>SANYO</b>	No.3558	<h1 style="margin: 0;">2SK1420</h1> <p style="margin: 0;">N-Channel MOS Silicon FET</p> <p style="margin: 0;">Very High-Speed Switching Applications</p>
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**Features**

- Low ON-state resistance.
- Very high-speed switching.
- Converters.
- Micaless package facilitating mounting.

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

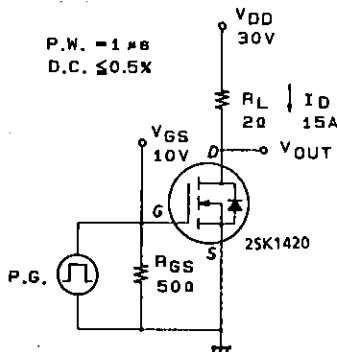
Parameter	Symbol	Condition	Value	unit
Drain to Source Voltage	V <sub>DSS</sub>		60	V
Gate to Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current(DC)	I <sub>D</sub>		25	A
Drain Current(Pulse)	I <sub>DP</sub>	PW ≤ 10 μs, duty cycle ≤ 1%	100	A
Allowable Power Dissipation	P <sub>D</sub>	Tc = 25°C	30	W
			2.0	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

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

Parameter	Symbol	Condition	min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0	60			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 60V, V <sub>GS</sub> = 0			100	μA
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0			±100	nA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA	1.5		2.5	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 15A	10	15		S
Static Drain to Source on State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> = 15A, V <sub>GS</sub> = 10V	0.035	0.045		Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		1200		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		550		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		150		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	I <sub>D</sub> = 15A, V <sub>GS</sub> = 10V V <sub>DD</sub> = 30V, R <sub>GS</sub> = 50Ω		18		ns
Rise Time	t <sub>r</sub>		102	ns		
Turn-OFF Delay Time	t <sub>d(off)</sub>		130	ns		
Fall Time	t <sub>f</sub>		90	ns		
Diode Forward Voltage	V <sub>SD</sub>		I <sub>S</sub> = 25A, V <sub>GS</sub> = 0		1.8	

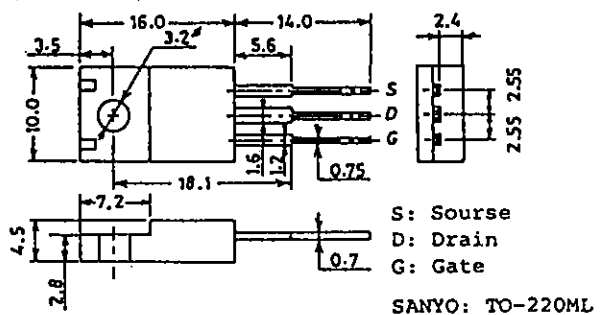
(Note) Be careful in handling the 2SK1420 because it has no protection diode between gate and source.

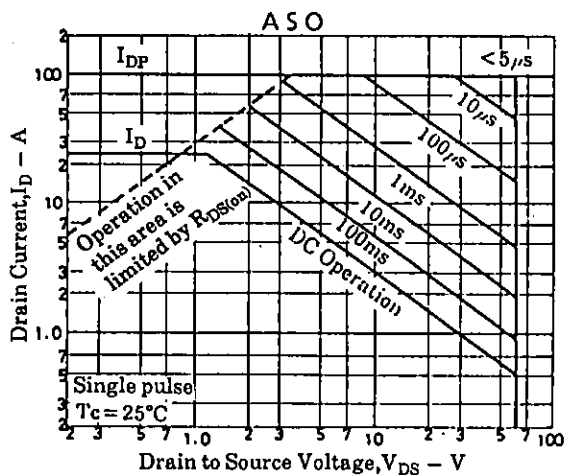
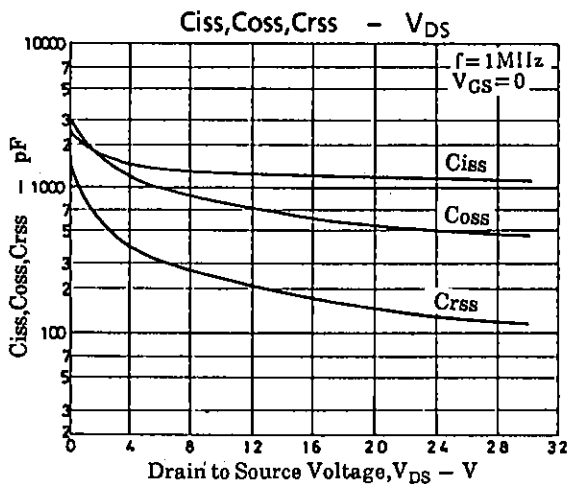
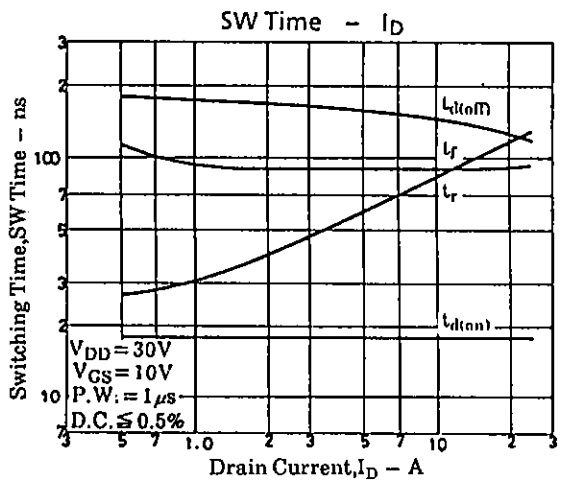
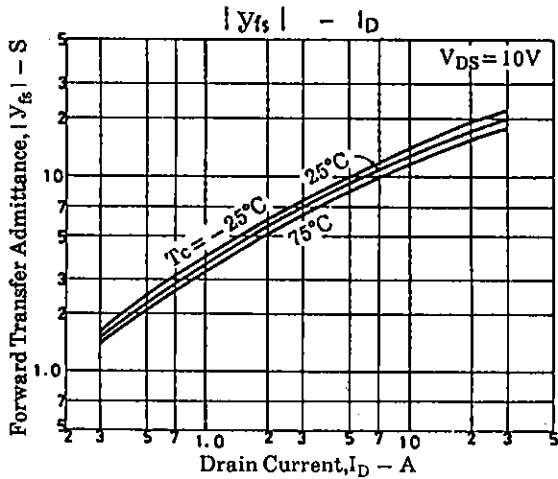
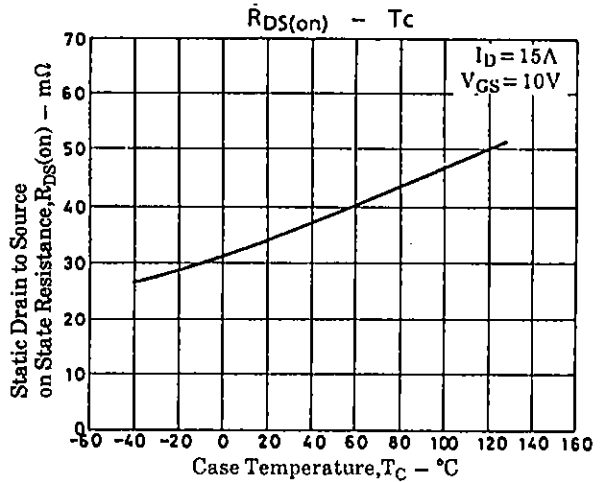
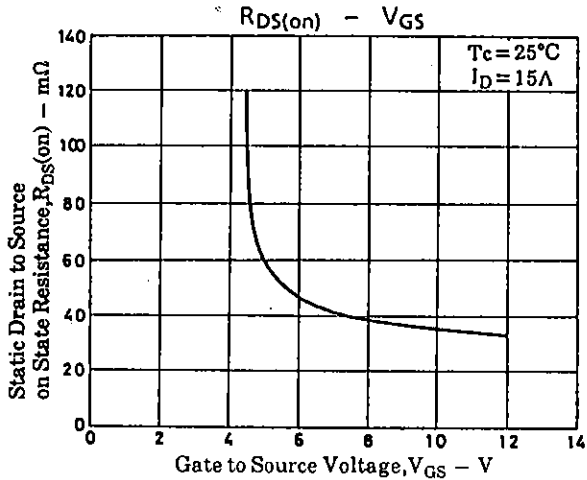
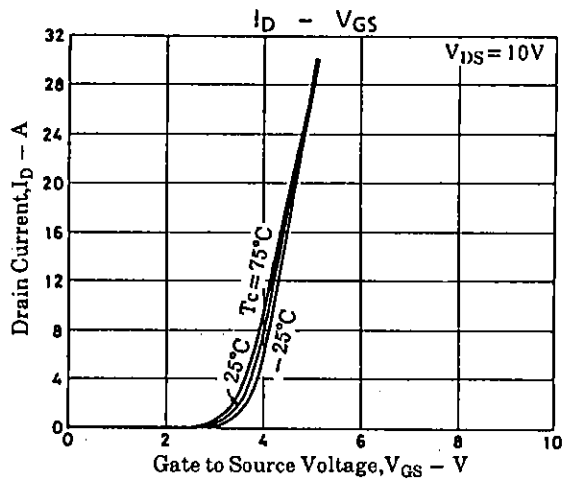
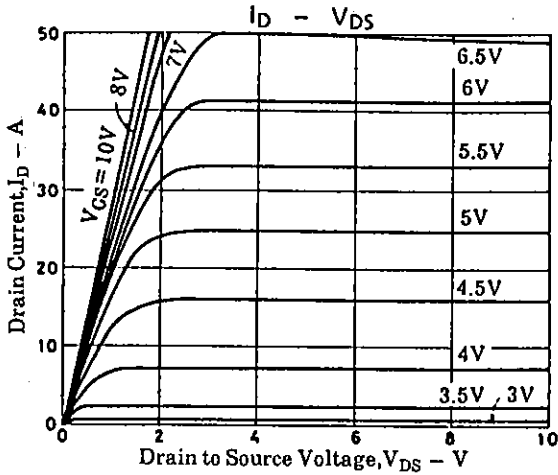
**Switching Time Test Circuit**

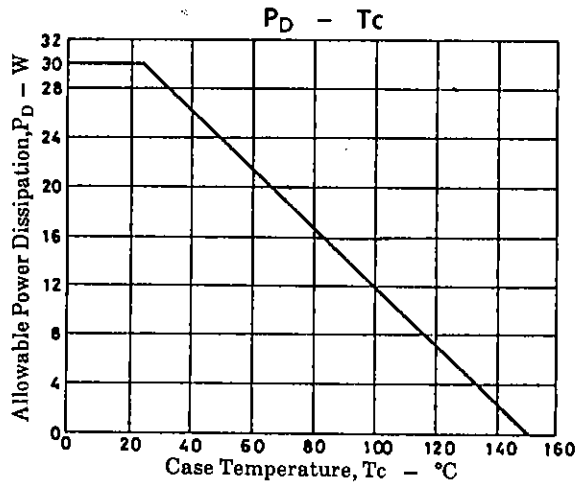
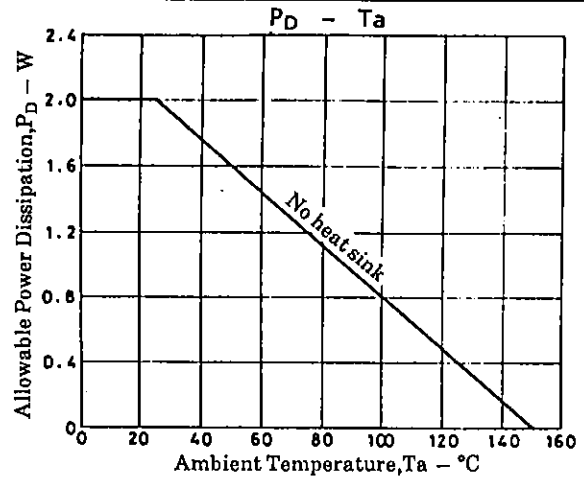
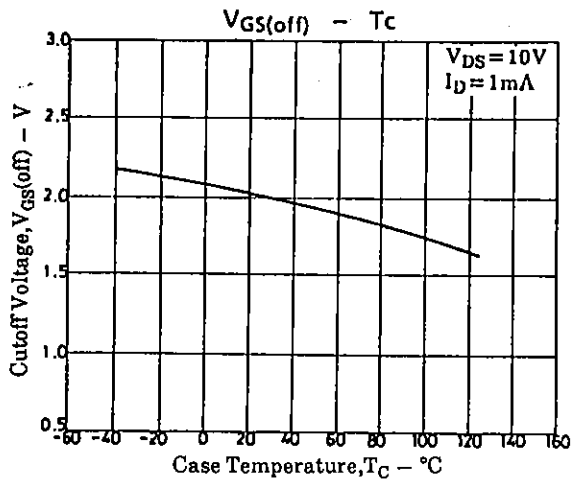


**Package Dimensions 2063**

(unit : mm)







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