



No.4500

**2SK1848**

N-Channel MOS Silicon FET  
Very High-Speed  
Switching Applications

**Features**

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.

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

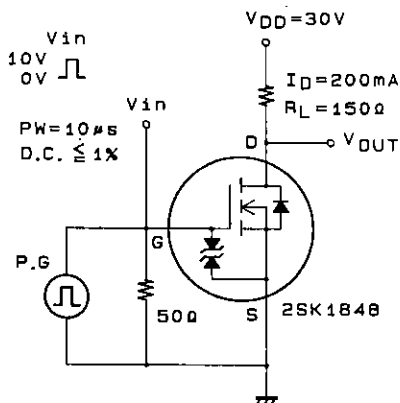
			unit
Drain to Source Voltage	V <sub>DSS</sub>	60	V
Gate to Source Voltage	V <sub>GSS</sub>	±15	V
Drain Current(DC)	I <sub>D</sub>	400	mA
Drain Current(Pulse)	I <sub>DP</sub>	PW ≤ 10μs, duty cycle ≤ 1%	1.6 A
Allowable Power Dissipation	P <sub>D</sub>	250	mW
Channel Temperature	T <sub>ch</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

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

			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			10	μA
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, V <sub>DS</sub> = 0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA	1.0		2.0	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 200mA	300	600		mS
Static Drain to Source on State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> = 200mA, V <sub>GS</sub> = 10V		0.9	1.2	Ω
	R <sub>DS(on)</sub>	I <sub>D</sub> = 200mA, V <sub>GS</sub> = 4V		1.2	1.6	Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		45		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		22		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> = 20V, f = 1MHz		5		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		5		ns
Rise Time	t <sub>r</sub>	"/		10		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	"/		35		ns
Fall Time	t <sub>f</sub>	"/		25		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> = 400mA, V <sub>GS</sub> = 0		0.9		V

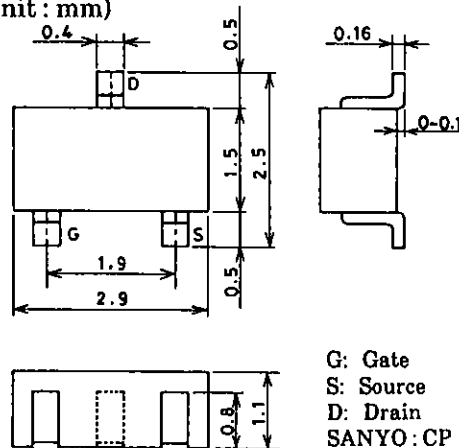
Marking: LJ

**Switching Time Test Circuit**

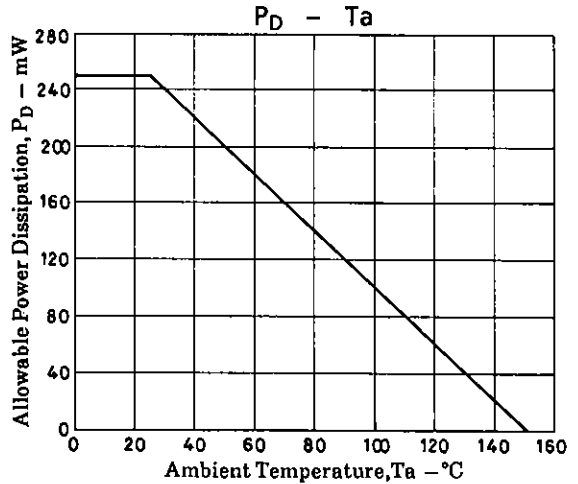
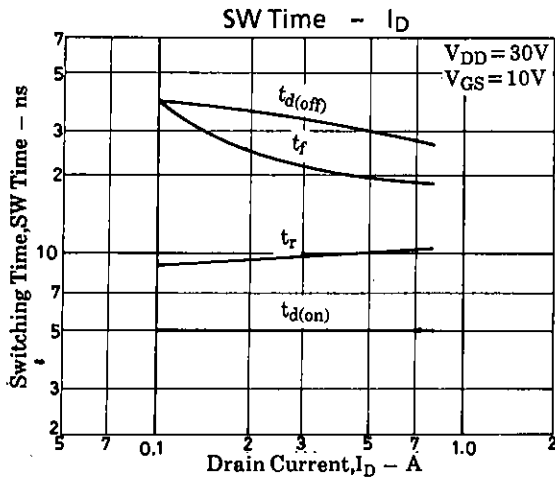
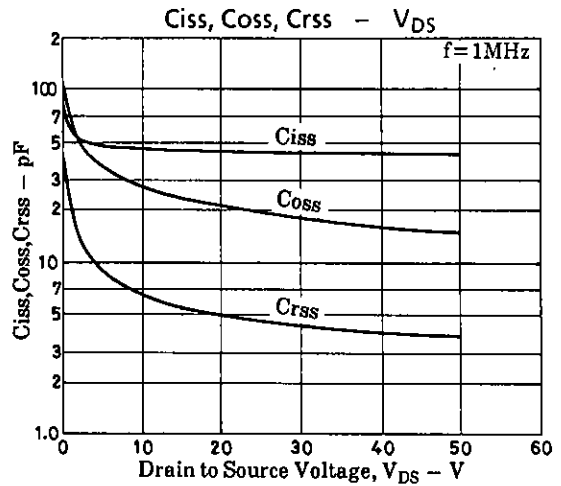
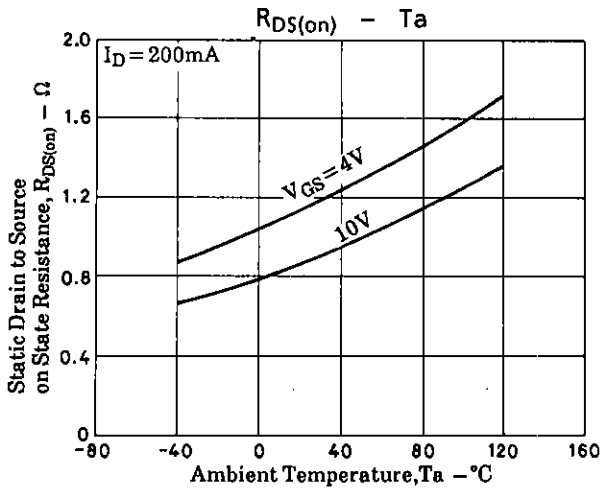
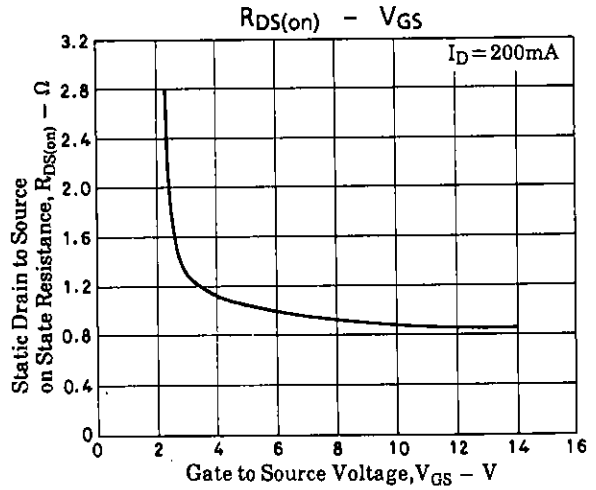
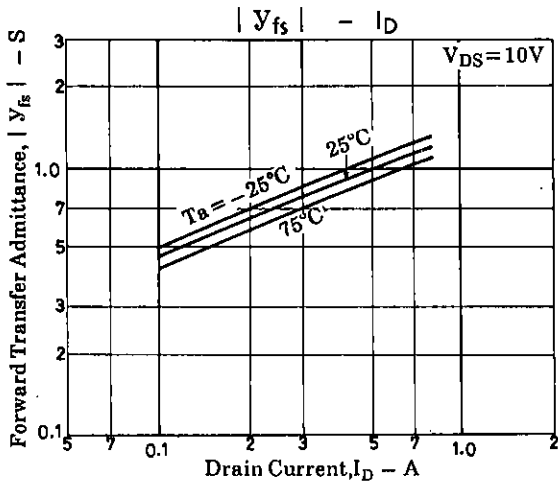
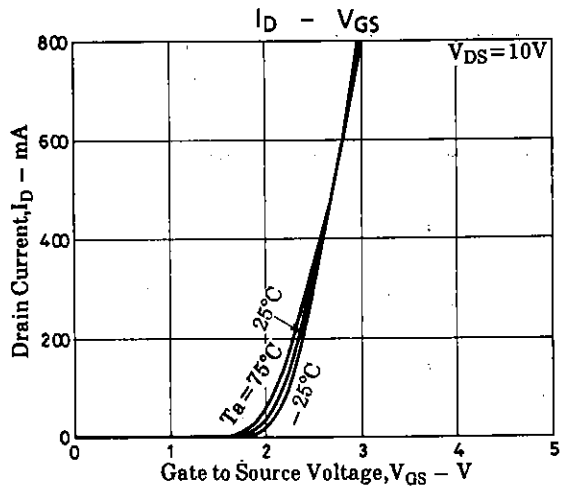
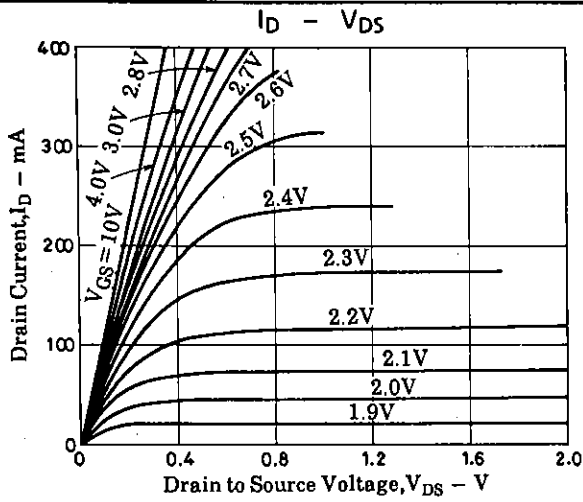


**Package Dimensions 2091**

(unit: mm)



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