

Ordering number:EN4500

N-Channel Silicon MOSFET



**2SK1848**

**Ultrahigh-Speed Switching Applications**

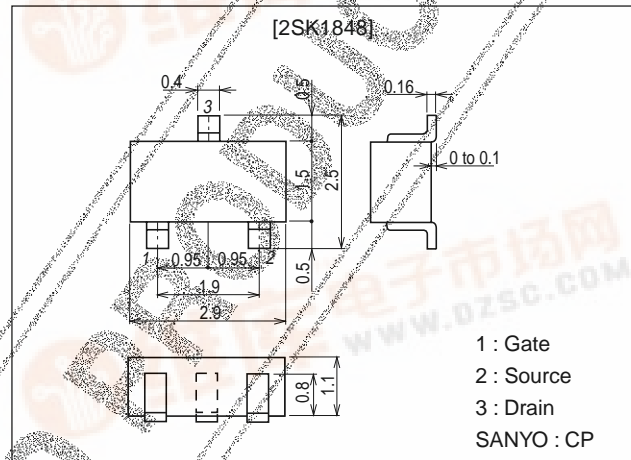
**Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- Low-voltage drive.

**Package Dimensions**

unit:mm

2091A



**Specifications**

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		60	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 15$	V
Drain Current (DC)	$I_D$		400	mA
Drain Current (pulse)	$I_{DP}$	$PW \leq 10\mu s$ , duty cycle $\leq 1\%$	1.6	A
Allowable Power Dissipation	$P_D$		250	mW
Channel Temperature	$T_{ch}$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	60			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 60V, V_{GS} = 0$			10	$\mu A$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12V, V_{DS} = 0$			$\pm 10$	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	1.0		2.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10V, I_D = 200mA$	300	600		mS
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = 200mA, V_{GS} = 10V$		0.9	1.2	$\Omega$
	$R_{DS(on)2}$	$I_D = 200mA, V_{GS} = 4V$		1.2	1.6	$\Omega$

Marking : LJ

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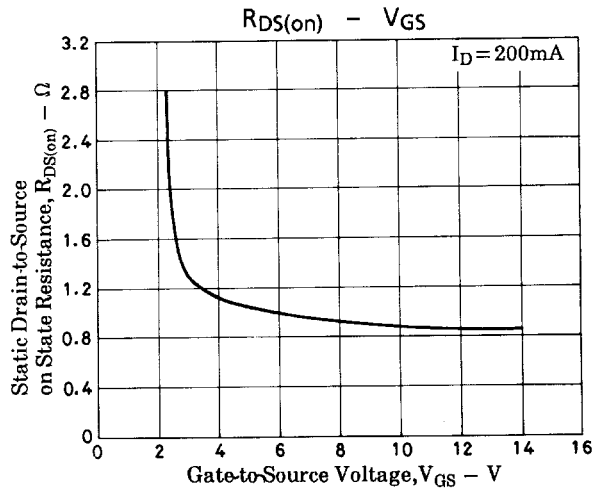
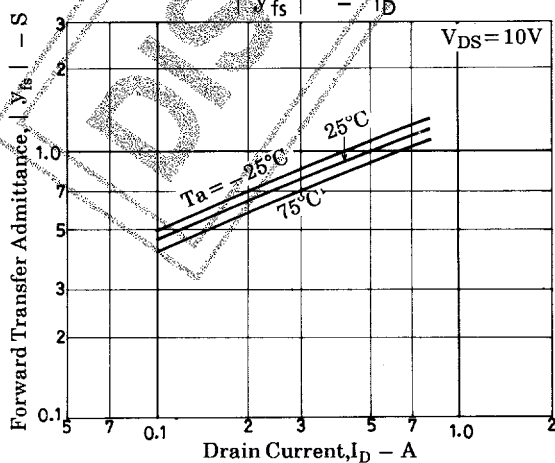
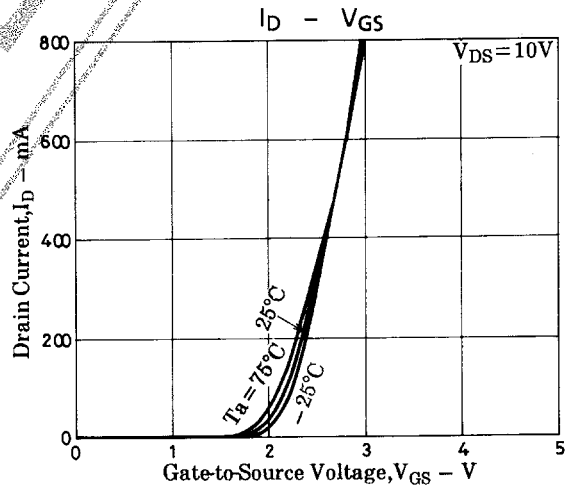
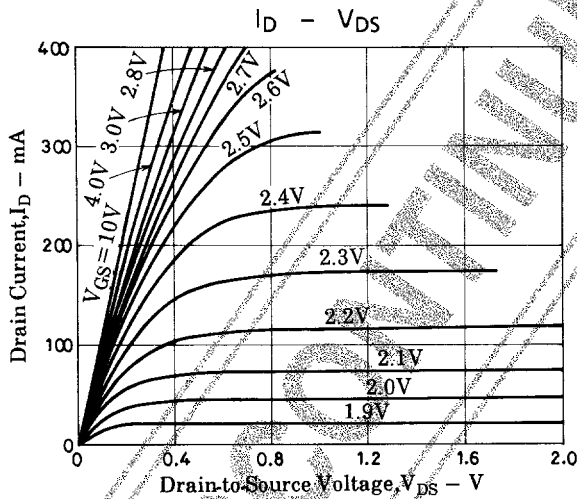
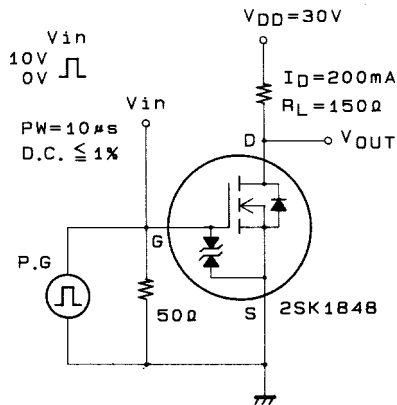


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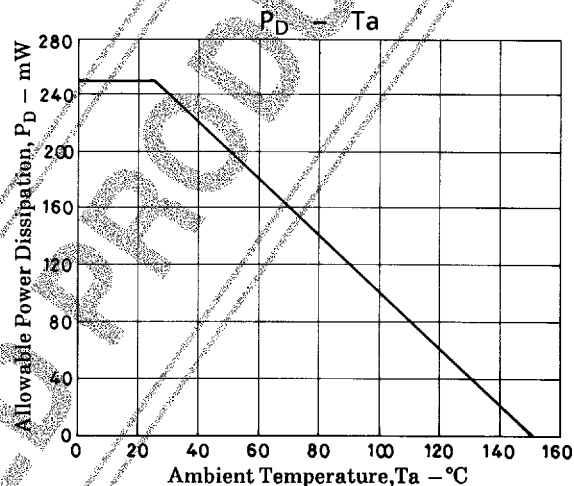
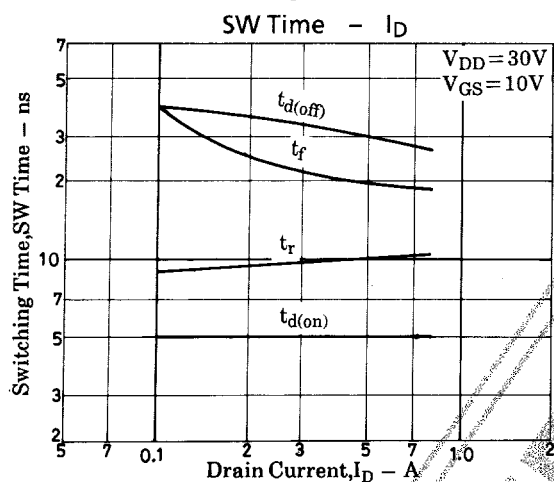
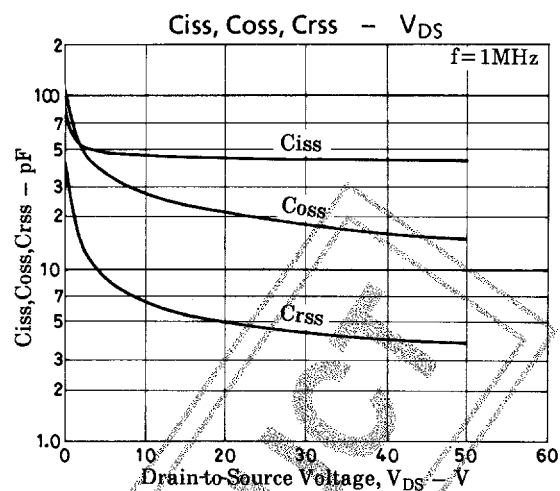
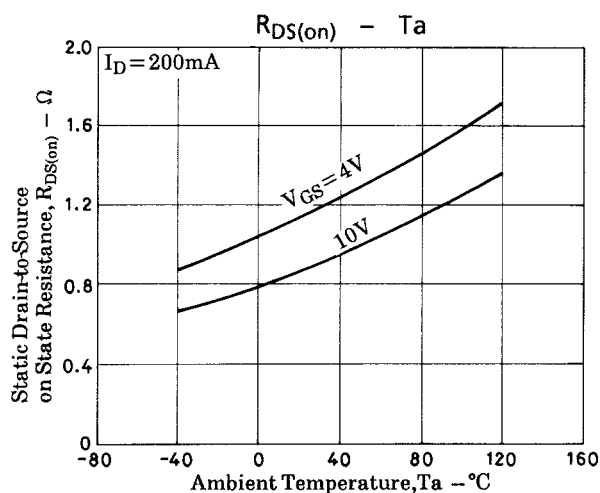
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Parameter	Symbol	Conditions	Ratings	Unit
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$	45	pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$	22	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$	5	pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit	5	ns
Rise Time	$t_r$	See specified Test Circuit	10	ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit	35	ns
Fall Time	$t_f$	See specified Test Circuit	25	ns
Diode Forward Voltage	$V_{SD}$	$I_S=400mA, V_{GS}=0$	0.9	V

## Switching Time Test Circuit



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