

**SANYO**

No.4505

**2SK1847**

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	$V_{DSS}$	30	V
Gate-to-Source Voltage	$V_{GSS}$	$\pm 15$	V
Drain Current(DC)	$I_D$	500	mA
Drain Current(Pulse)	$I_{DP}$	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	A
Allowable Power Dissipation	$P_D$	250	mW
Channel Temperature	$T_{ch}$	150	°C
Storage Temperature	$T_{stg}$	-55 to +150	°C

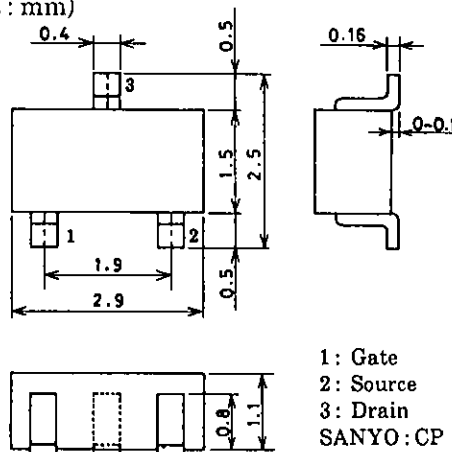
**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}, V_{GS} = 0$	30			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 30\text{V}, V_{GS} = 0$			10	$\mu\text{A}$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12\text{V}, V_{DS} = 0$			$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}, I_D = 250\text{mA}$	350	700		mS
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 250\text{mA}, V_{GS} = 10\text{V}$		0.5	0.75	$\Omega$
	$R_{DS(on)}$	$I_D = 250\text{mA}, V_{GS} = 4\text{V}$		0.75	1.1	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = 10\text{V}, f = 1\text{MHz}$		50		pF
Output Capacitance	$C_{oss}$	$V_{DS} = 10\text{V}, f = 1\text{MHz}$		35		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 10\text{V}, f = 1\text{MHz}$		10		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		5		ns
Rise Time	$t_r$	"		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		35		ns
Fall Time	$t_f$	"		20		ns
Diode Forward Voltage	$V_{SD}$	$I_S = 500\text{mA}, V_{GS} = 0$		0.9		V

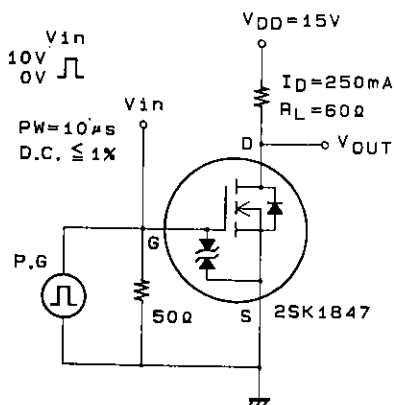
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**Package Dimensions 2091A**

(unit: mm)

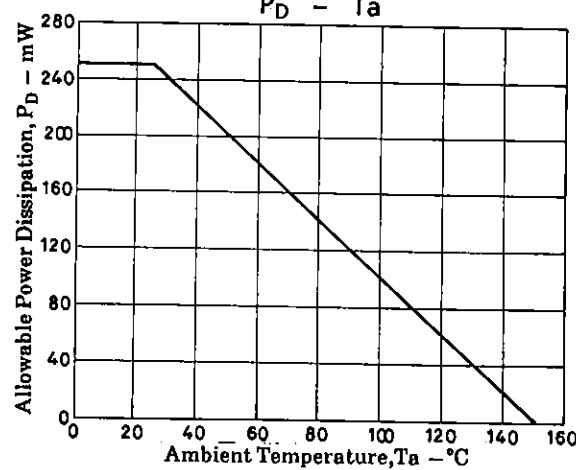
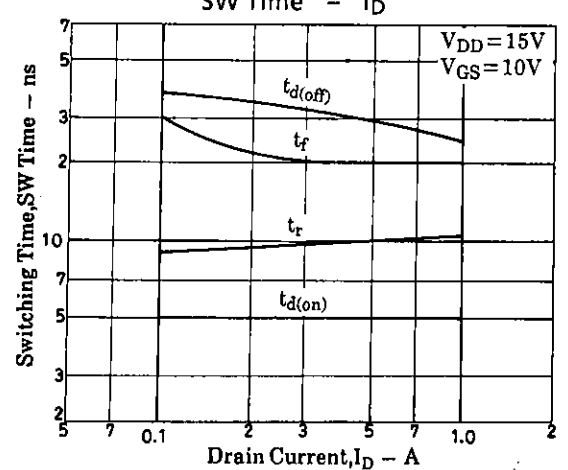
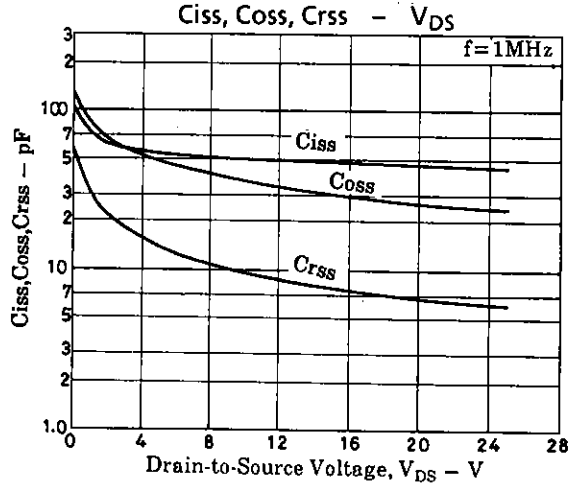
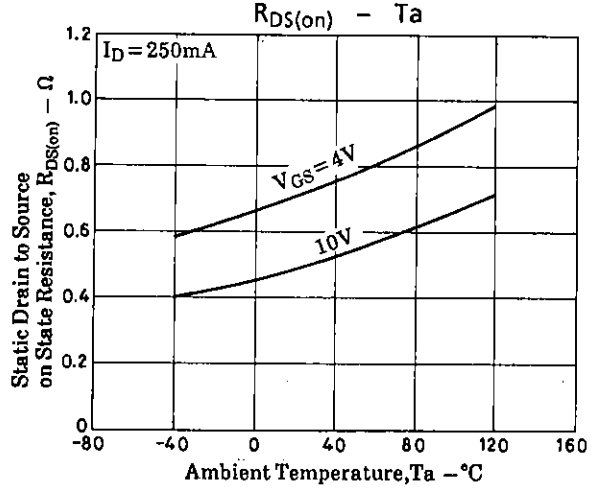
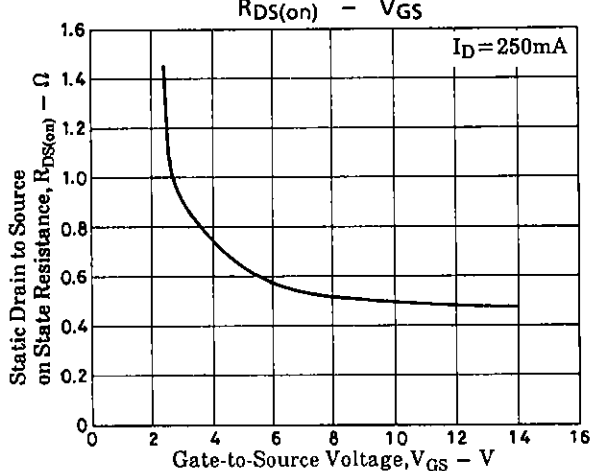
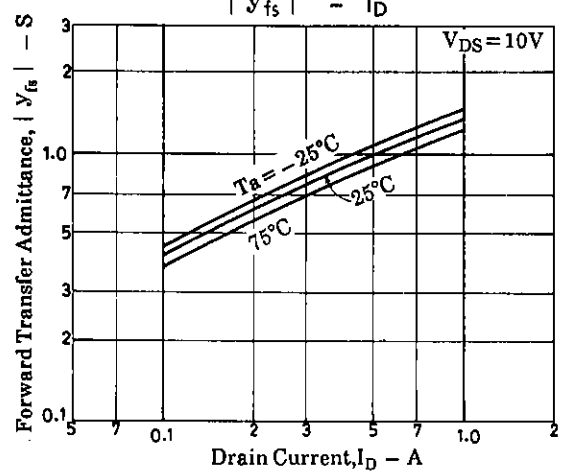
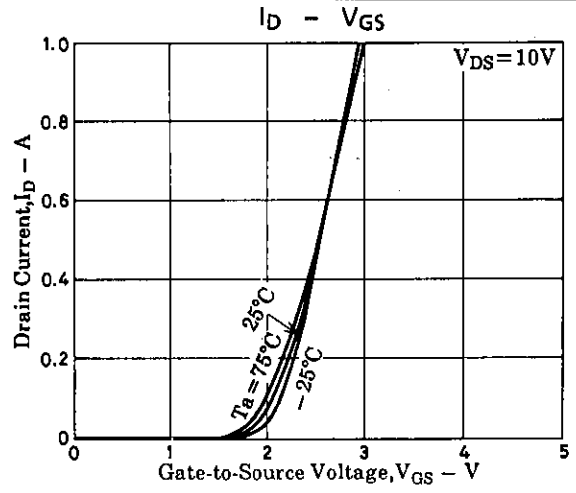
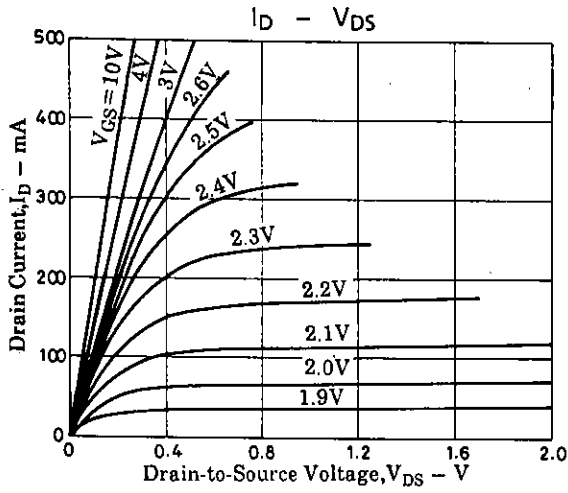


1: Gate  
2: Source  
3: Drain  
SANYO: CP

**Switching Time Test Circuit**

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