

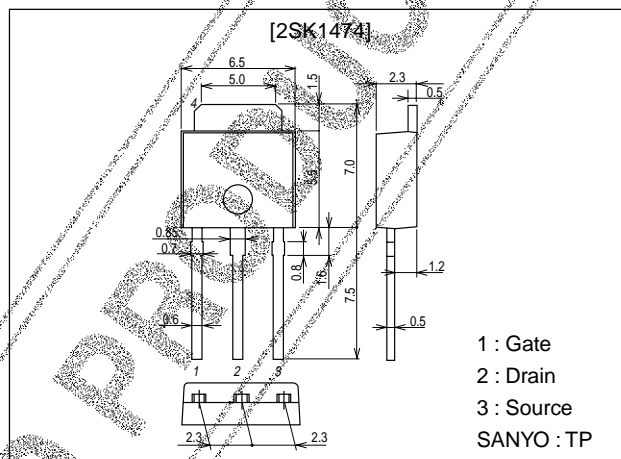
**SANYO****2SK1474****Ultrahigh-Speed Switching Applications****Features**

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

**Package Dimensions**

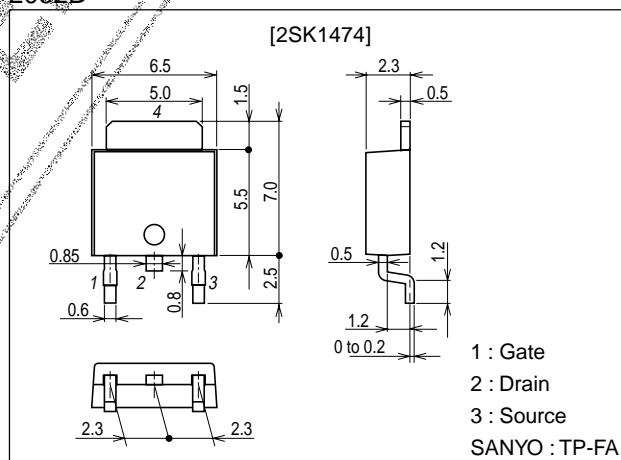
unit:mm

2083B



unit:mm

2092B



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■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

**SANYO Electric Co.,Ltd. Semiconductor Company**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

## Specifications

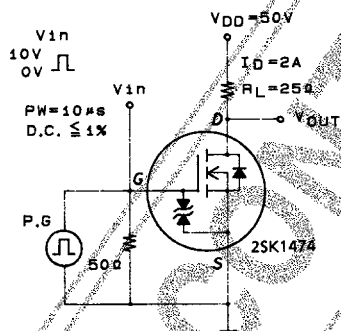
### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

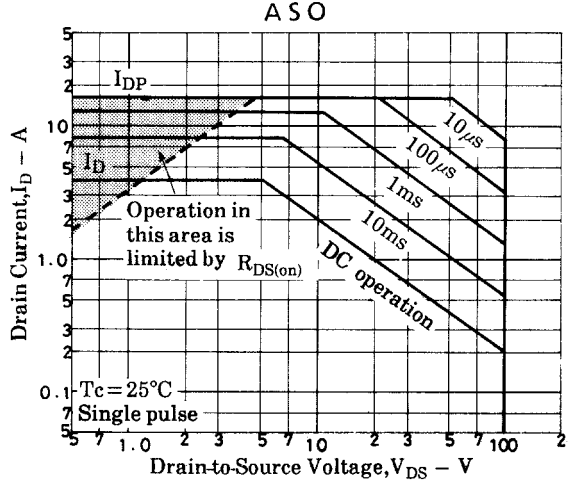
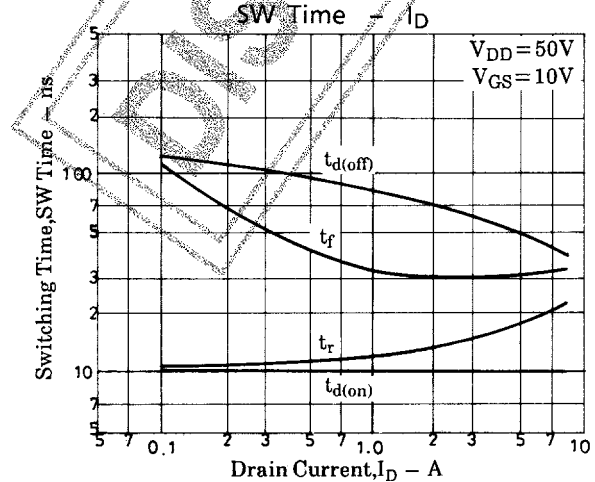
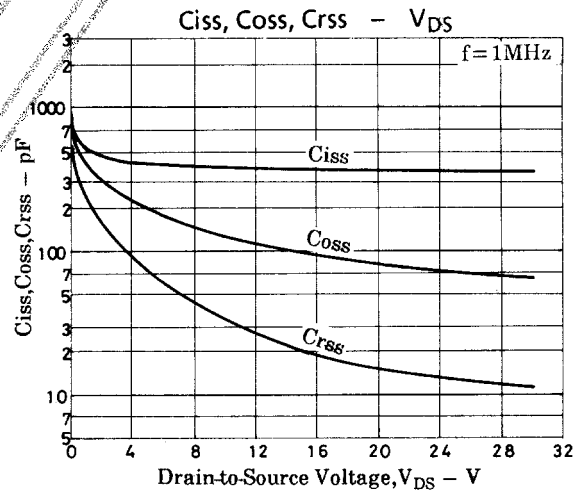
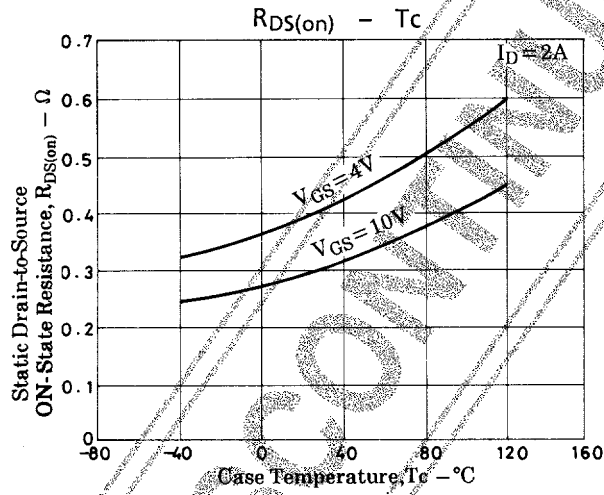
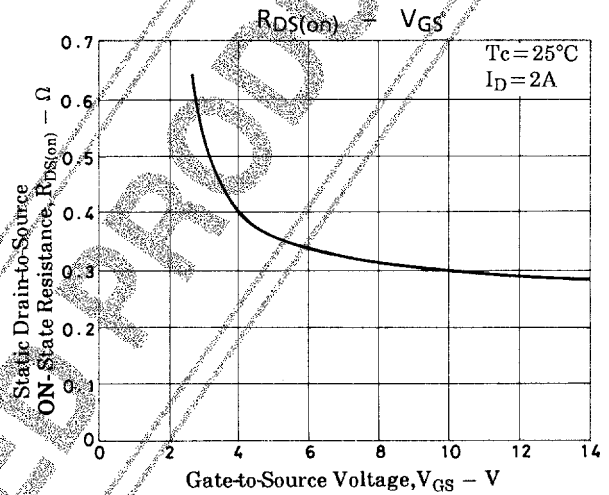
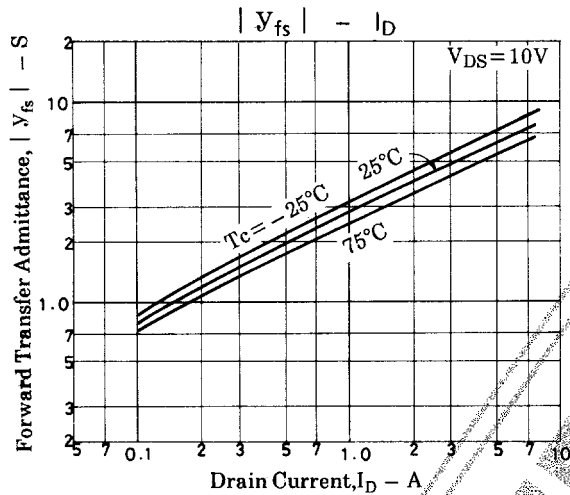
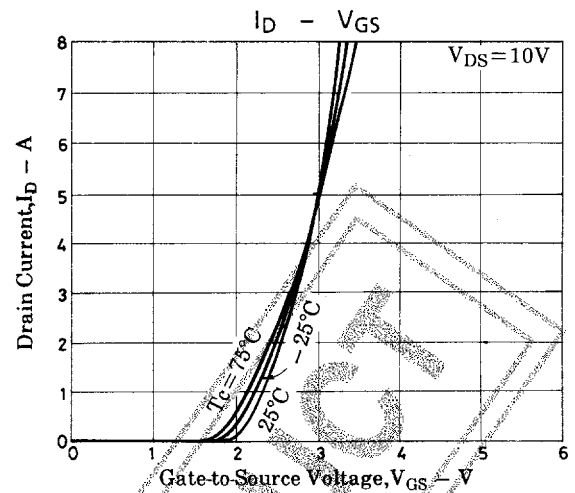
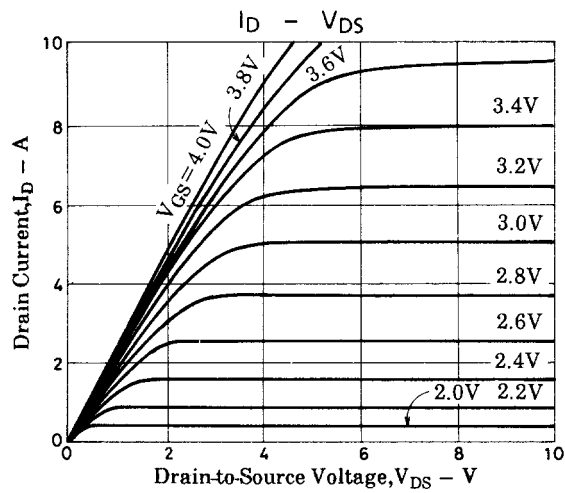
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		100	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 15$	V
Drain Current (DC)	$I_D$		4	A
Drain Current (pulse)	$I_{DP}$	$PW \leq 10\mu\text{s}$ , duty cycle $\leq 1\%$	16	A
Allowable Power Dissipation	$P_D$	$T_c = 25^\circ\text{C}$	20	W
Channel Temperature	$T_{ch}$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

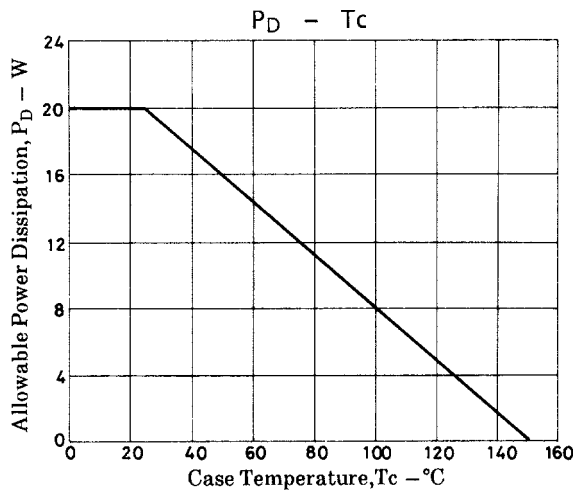
### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}$ , $V_{GS} = 0$	100			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}$ , $V_{DS} = 0$	$\pm 15$			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 100\text{V}$ , $V_{GS} = 0$			100	$\mu\text{A}$
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} $	$V_{DS} = 10\text{V}$ , $I_D = 2\text{A}$	2.5	4		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = 2\text{A}$ , $V_{GS} = 10\text{V}$		0.3	0.4	$\Omega$
	$R_{DS(on)2}$	$I_D = 2\text{A}$ , $V_{GS} = 4\text{V}$		0.4	0.55	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = 20\text{V}$ , $f = 1\text{MHz}$		380		pF
Output Capacitance	$C_{oss}$	$V_{DS} = 20\text{V}$ , $f = 1\text{MHz}$		80		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 20\text{V}$ , $f = 1\text{MHz}$		15		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	$t_r$	See specified Test Circuit		13		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		70		ns
Fall Time	$t_f$	See specified Test Circuit		30		ns
Diode Forward Voltage	$V_{SD}$	$I_S = 4\text{A}$ , $V_{GS} = 0$		1.0	1.5	V

### Switching Time Test Circuit







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