

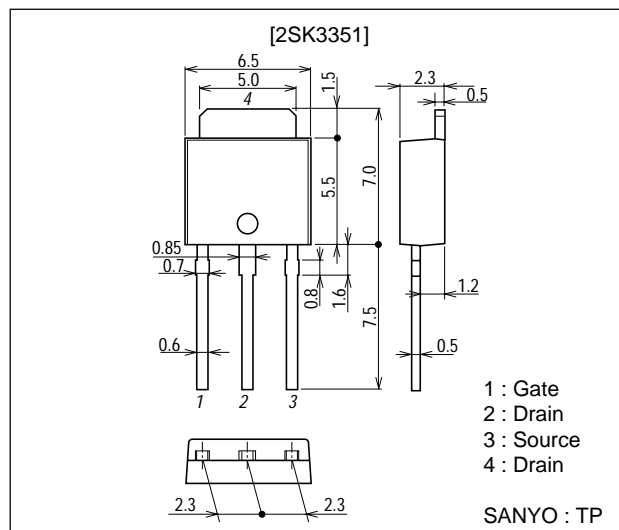
**SANYO****2SK3351****DC/DC Converter Applications****Preliminary****Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- 4V-drive.

**Package Dimensions**

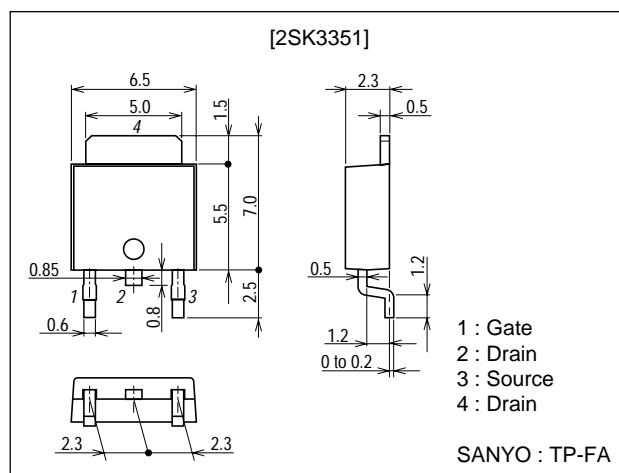
unit : mm

2083B



unit : mm

2092B



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## Specifications

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

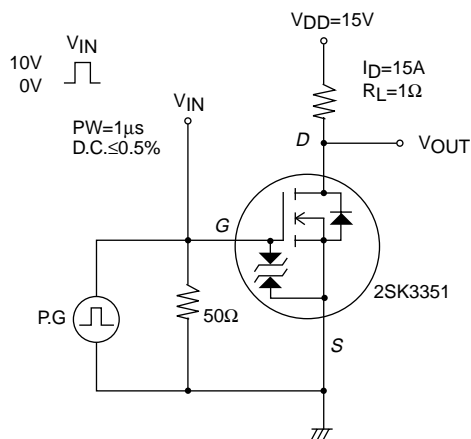
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		30	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 20$	V
Drain Current (DC)	$I_D$		30	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu s$ , duty cycle $\leq 1\%$	60	A
Allowable Power Dissipation	$P_D$		1	W
		$T_C = 25^\circ C$	30	W
Channel Temperature	$T_{ch}$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA$ , $V_{GS} = 0$	30			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 30V$ , $V_{GS} = 0$			1	$\mu A$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 16V$ , $V_{DS} = 0$			$\pm 10$	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V$ , $I_D = 1mA$	1.0		2.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10V$ , $I_D = 15A$	14	20		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = 15A$ , $V_{GS} = 10V$		11	15	$m\Omega$
	$R_{DS(on)2}$	$I_D = 4A$ , $V_{GS} = 4.5V$		15	21	$m\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = 10V$ , $f = 1MHz$		1450		pF
Output Capacitance	$C_{oss}$	$V_{DS} = 10V$ , $f = 1MHz$		420		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 10V$ , $f = 1MHz$		210		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		14		ns
Rise Time	$t_r$	See specified Test Circuit		355		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit		110		ns
Fall Time	$t_f$	See specified Test Circuit		120		ns
Total Gate Charge	$Q_g$	$V_{DS} = 10V$ , $V_{GS} = 10V$ , $I_D = 30A$		28		nC
Gate-to-Source Charge	$Q_{gs}$	$V_{DS} = 10V$ , $V_{GS} = 10V$ , $I_D = 30A$		4.6		nC
Gate-to-Drain "Miller" Charge	$Q_{gd}$	$V_{DS} = 10V$ , $V_{GS} = 10V$ , $I_D = 30A$		5		nC
Diode Forward Voltage	$V_{SD}$	$I_S = 30A$ , $V_{GS} = 0$		0.92	1.2	V

Marking : K3351

### Switching Time Test Circuit



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