Ordering number : ENN6600

N-Channel Silicon MOSFET

2SK3351

DC/DC Converter Applications

Preliminary

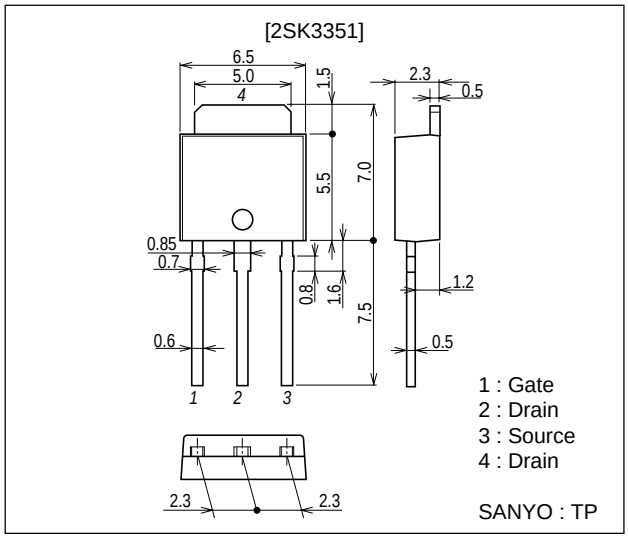
Features

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

Package Dimensions

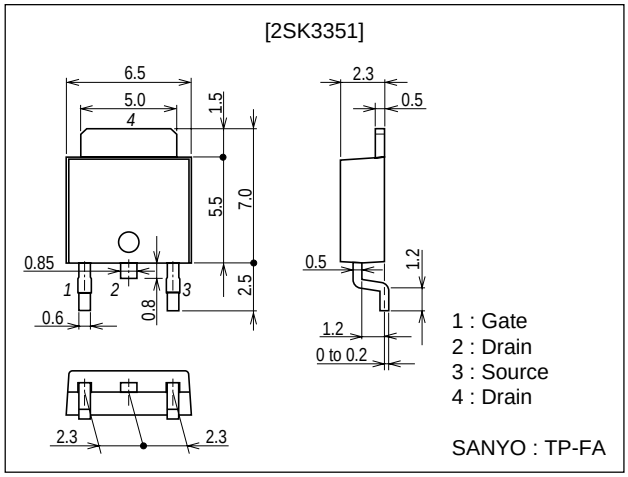
unit : mm

2083B



unit : mm

2092B



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 Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		30	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		30	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	60	A
Allowable Power Dissipation	P_D		1	W
		Tc=25°C	30	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−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	30			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0			1	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0			±10	μA
Cutoff Voltage	V_{GS}(off)	V_{DS}=10V, I_D=1mA	1.0		2.4	V
Forward Transfer Admittance	|yfs|	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	mΩ
	R_{DS}(on)2	I_D=4A, V_{GS}=4.5V		15	21	mΩ
Input Capacitance	Ciss	V_{DS}=10V, f=1MHz		1450		pF
Output Capacitance	Coss	V_{DS}=10V, f=1MHz		420		pF
Reverse Transfer Capacitance	Crss	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	Qg	V_{DS}=10V, V_{GS}=10V, I_D=30A		28		nC
Gate-to-Source Charge	Qgs	V_{DS}=10V, V_{GS}=10V, I_D=30A		4.6		nC
Gate-to-Drain “Miller”Charge	Qgd	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