2SK3278



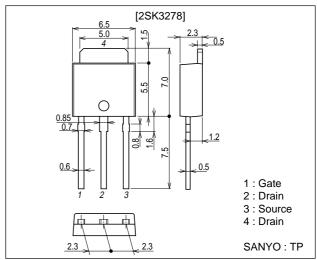
DC/DC Converter Applications

Features

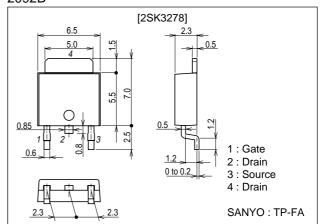
- · Low ON-resistance.
- 4V drive.
- · Ultrahigh-speed switching.

Package Dimensions

unit : mm 2083B



unit : mm 2092B



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		30	V
Gate-to-Source Voltage	VGSS		±20	٧

Continued on next page.

- Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.
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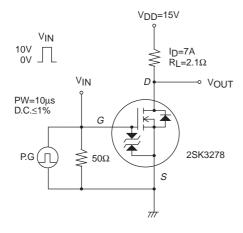
Parameter	Symbol	Conditions	Ratings	Unit
Drain Current (DC)	ΙD		15	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	45	Α
Allowable Power Dissipation	PD		1	W
		Tc=25°C	15	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

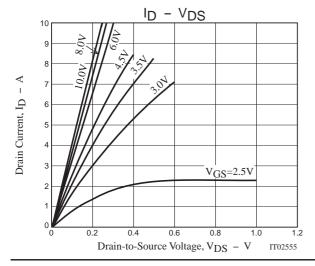
Electrical Characteristics at Ta=25°C

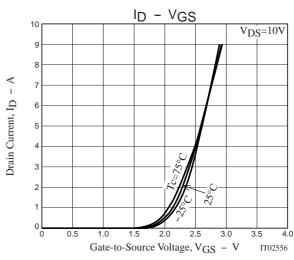
Parameter	Symbol	Conditions	Rathings			Unit
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0	30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =30V, V _{GS} =0			1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	1.0		2.4	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =7A	7	10		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =7A, V _{GS} =10V		27	36	mΩ
	R _{DS} (on)2	I _D =4A, V _G S=4.5V		40	56	$m\Omega$
Input Capacitance	Ciss	V _{DS} =10V, f=1MHz		530		pF
Output Capacitance	Coss	V _{DS} =10V, f=1MHz		170		pF
Reverse Transfer Capacitance	Crss	V _{DS} =10V, f=1MHz		90		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit		9		ns
Rise Time	t _r	See specified Test Circuit		130		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit		40		ns
Fall Time	tf	See specified Test Circuit		60		ns
Total Gate Charge	Qg	V _{DS} =10V, V _{GS} =10V, I _D =15A		10		nC
Gate-to-Source Charge	Qgs	V _{DS} =10V, V _{GS} =10V, I _D =15A		1.5		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =10V, V _{GS} =10V, I _D =15A		1.0		nC
Diode Forward Voltage	V _{SD}	I _S =15A, V _G S=0		1.0	1.2	V

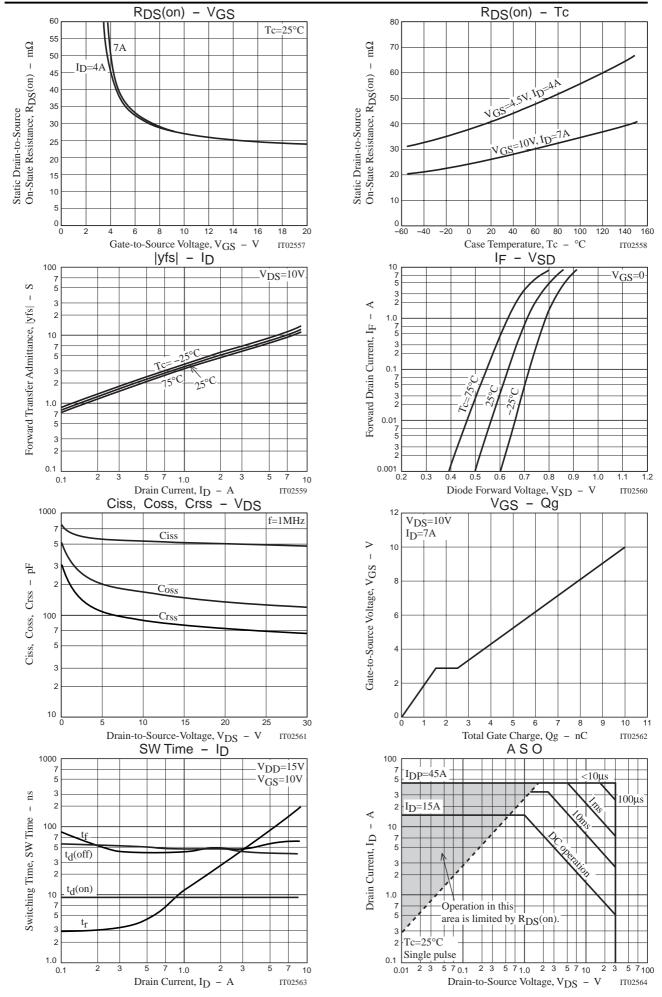
Marking: K3278

Switching Time Test Circuit

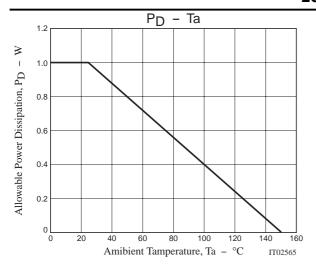


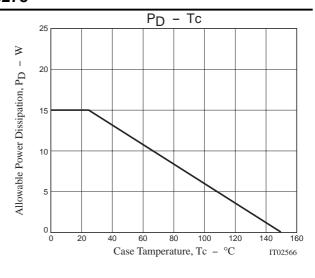






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