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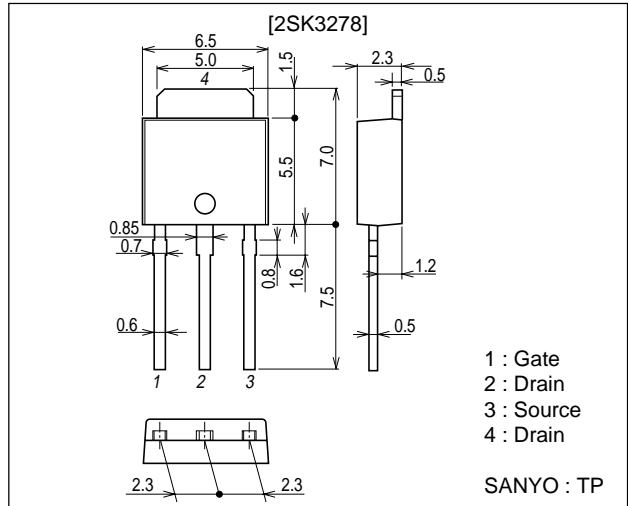
DC/DC Converter Applications

Features

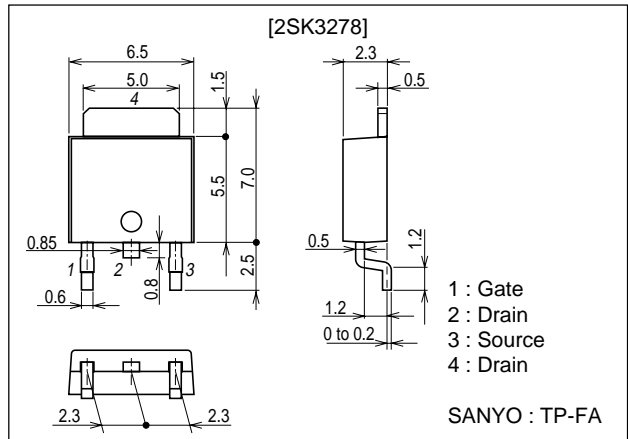
- Low ON-resistance.
- 4V drive.
- Ultrahigh-speed switching.

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	V _{DSS}		30	V
Gate-to-Source Voltage	V _{GSS}		±20	V

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.

■ 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.

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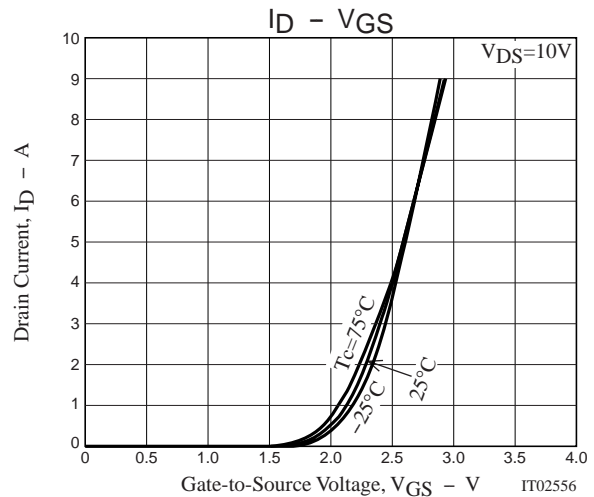
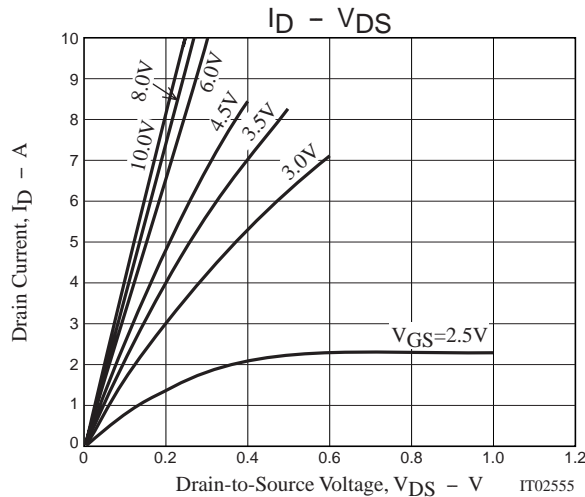
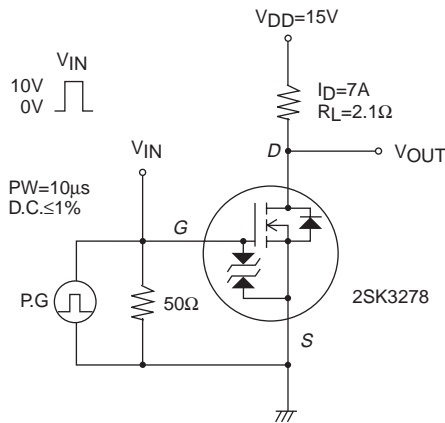
Parameter	Symbol	Conditions	Ratings	Unit
Drain Current (DC)	I_D		15	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	45	A
Allowable Power Dissipation	P_D	$T_c = 25^\circ C$	1	W
			15	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

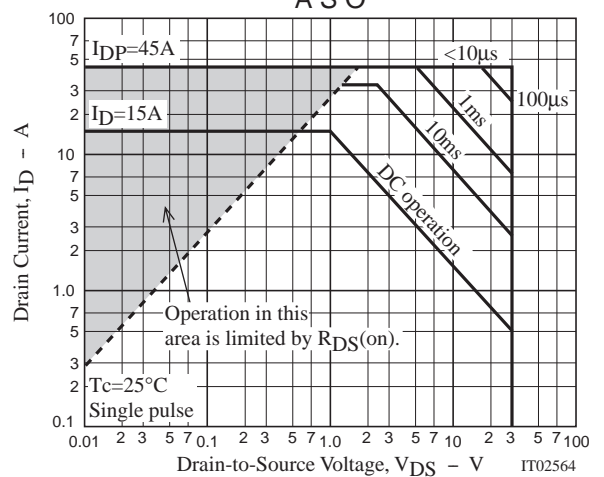
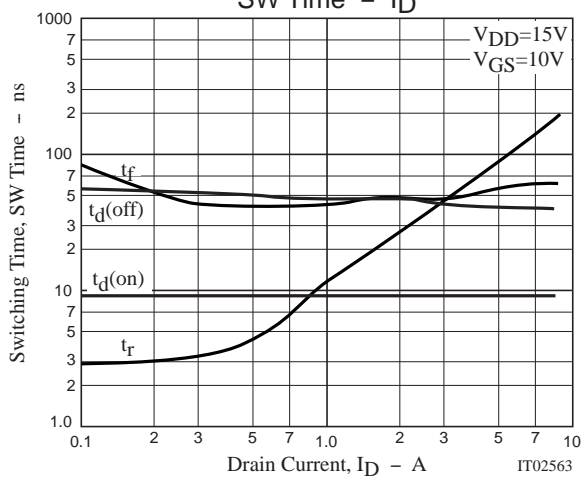
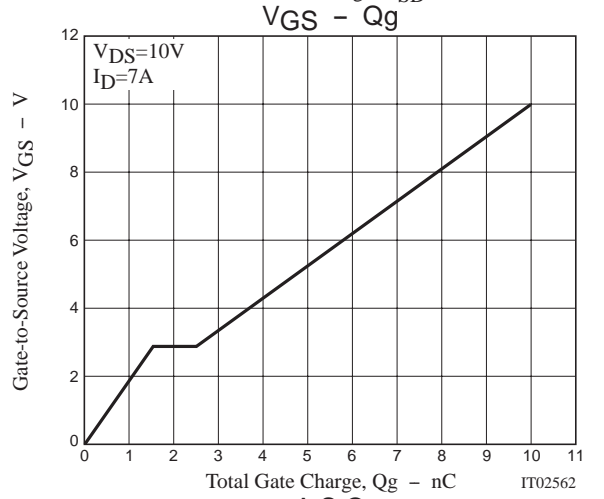
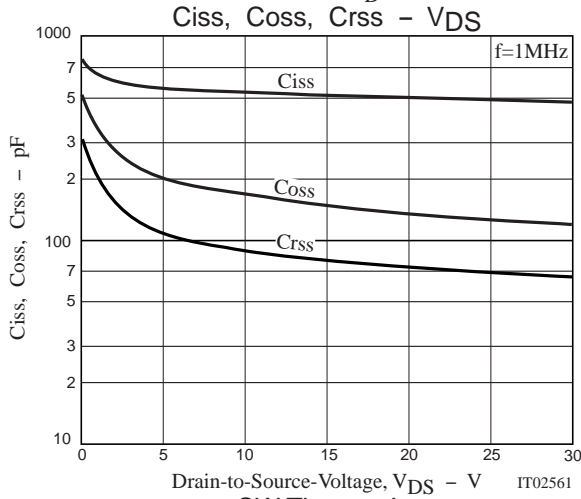
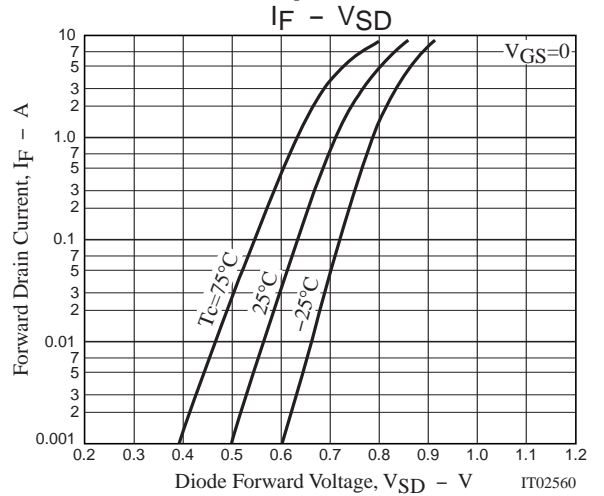
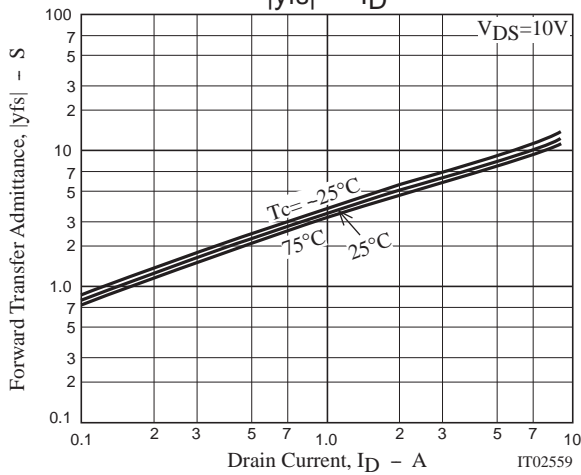
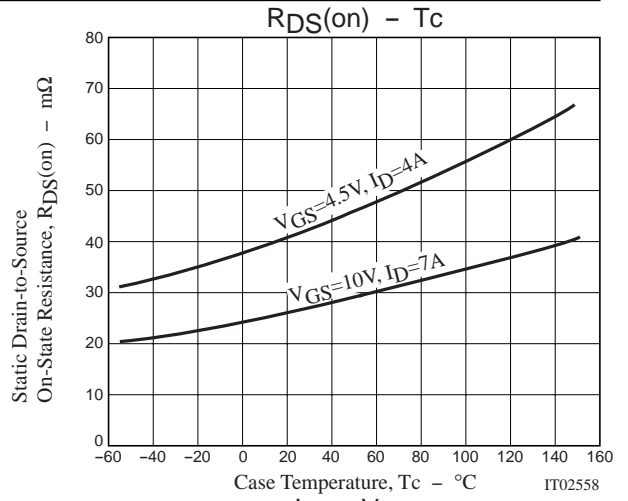
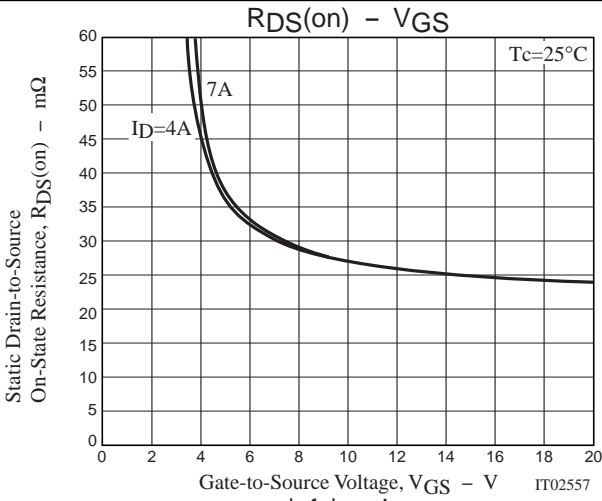
Electrical Characteristics at $T_a = 25^\circ C$

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}	$V_{GS} = \pm 16V$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V$, $I_D = 1mA$	1.0		2.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10V$, $I_D = 7A$	7	10		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = 7A$, $V_{GS} = 10V$		27	36	$m\Omega$
	$R_{DS(on)2}$	$I_D = 4A$, $V_{GS} = 4.5V$		40	56	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS} = 10V$, $f = 1MHz$		530		pF
Output Capacitance	C_{oss}	$V_{DS} = 10V$, $f = 1MHz$		170		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10V$, $f = 1MHz$		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	t_f	See specified Test Circuit		60		ns
Total Gate Charge	Q_g	$V_{DS} = 10V$, $V_{GS} = 10V$, $I_D = 15A$		10		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = 10V$, $V_{GS} = 10V$, $I_D = 15A$		1.5		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS} = 10V$, $V_{GS} = 10V$, $I_D = 15A$		1.0		nC
Diode Forward Voltage	V_{SD}	$I_S = 15A$, $V_{GS} = 0$	1.0	1.2		V

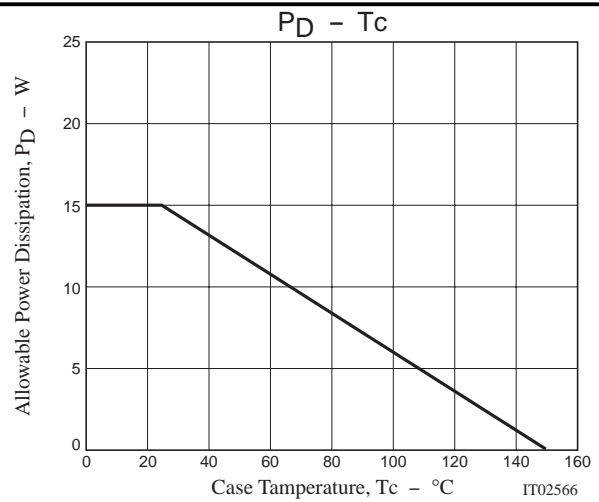
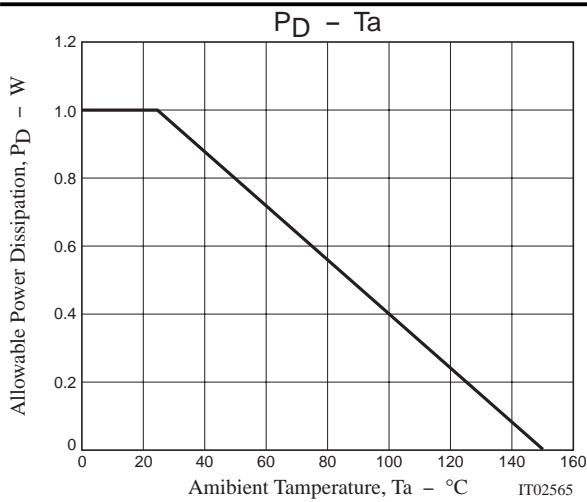
Marking : K3278

Switching Time Test Circuit





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