

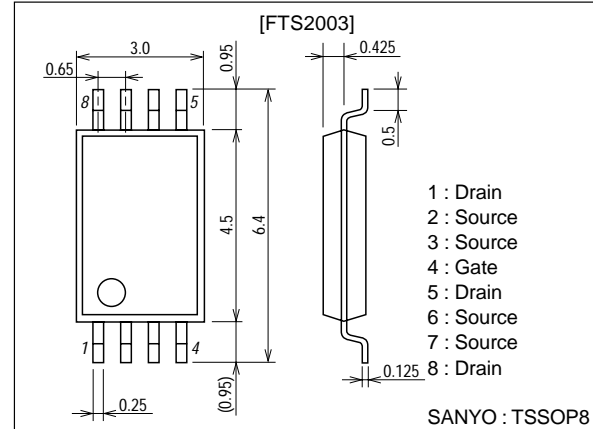
**FTS2003****DC/DC Converter Applications****Features**

- Low ON resistance.
- 2.5V drive.
- Mount height of 1.1mm.

Package Dimensions

unit:mm

2147A

**Specifications****Absolute Maximum Ratings** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		20	V
Gate-to-Source Voltage	V_{GS}		± 10	V
Drain Current (DC)	I_D		4	A
Drain Current (pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	25	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (1000mm ² ×0.8mm)	1.3	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	$V_{(BR)DSS}$	$I_D=1mA$, $V_{GS}=0$	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V$, $V_{GS}=0$			10	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 8V$, $V_{DS}=0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V$, $I_D=1mA$	0.4		1.3	V
Forward Transfer Admittance	yfs	$V_{DS}=10V$, $I_D=4A$	7		10	S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=4A$, $V_{GS}=4V$		38	50	m Ω
	$R_{DS(on)2}$	$I_D=2A$, $V_{GS}=2.5V$		50	70	m Ω
Input Capacitance	Ciss	$V_{DS}=10V$, f=1MHz		500		pF
Output Capacitance	Coss	$V_{DS}=10V$, f=1MHz		280		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=10V$, f=1MHz		150		pF

Marking : S2003

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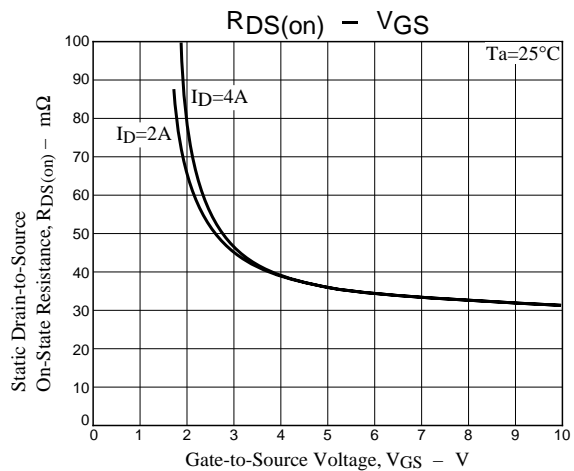
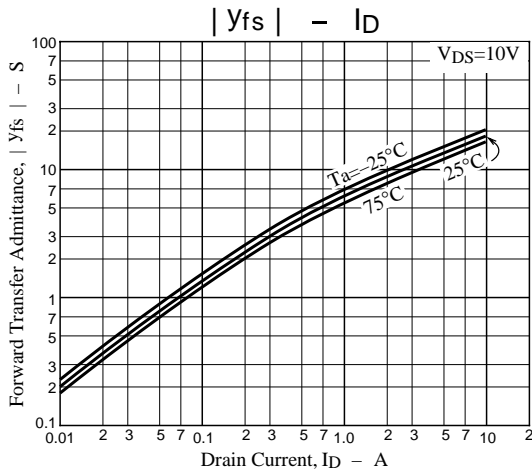
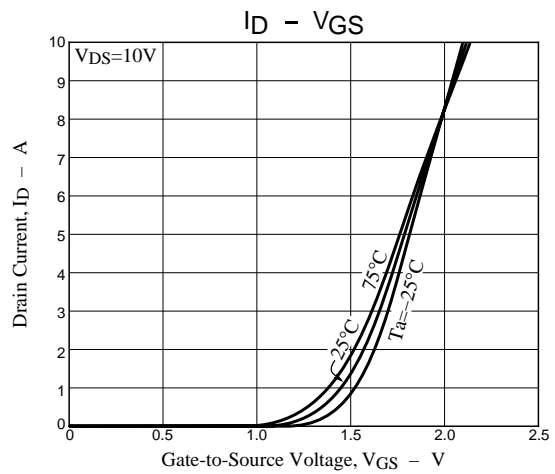
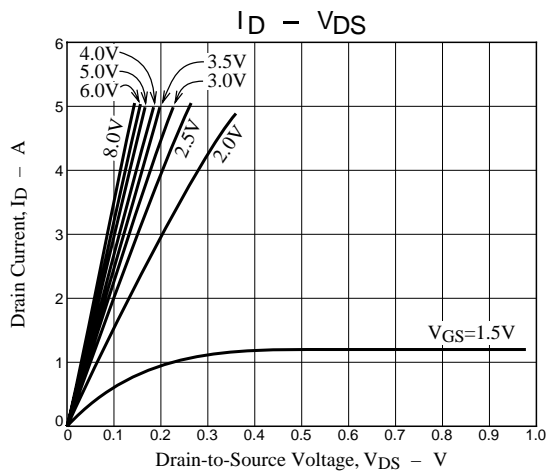
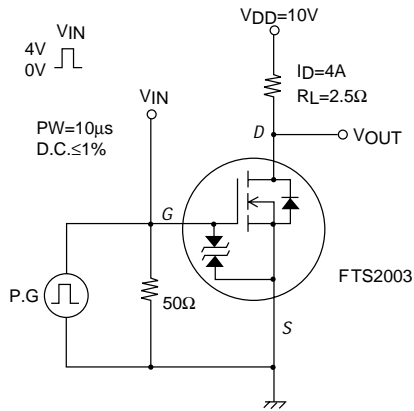
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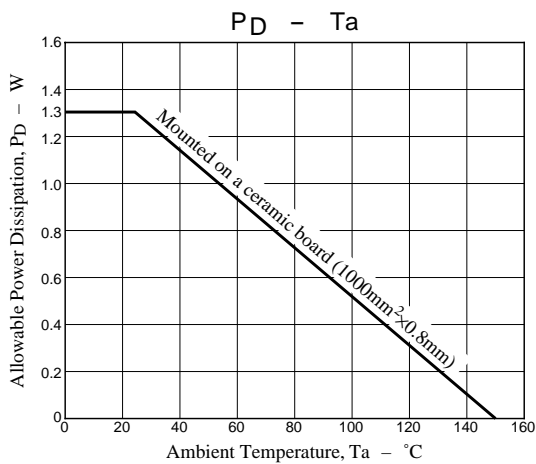
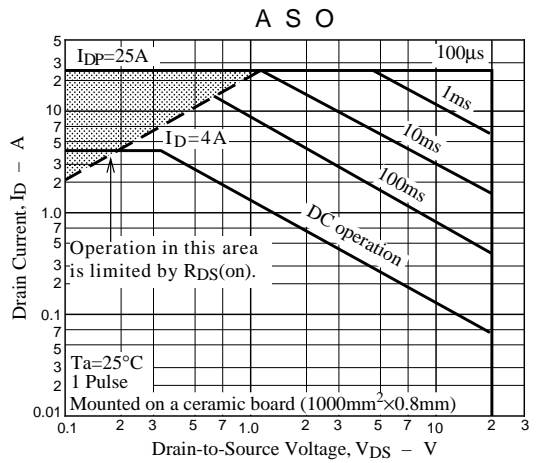
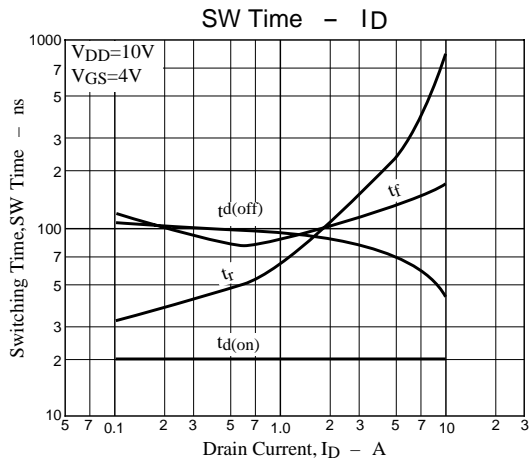
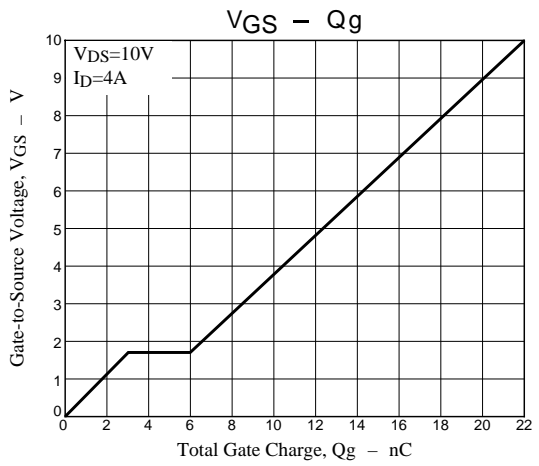
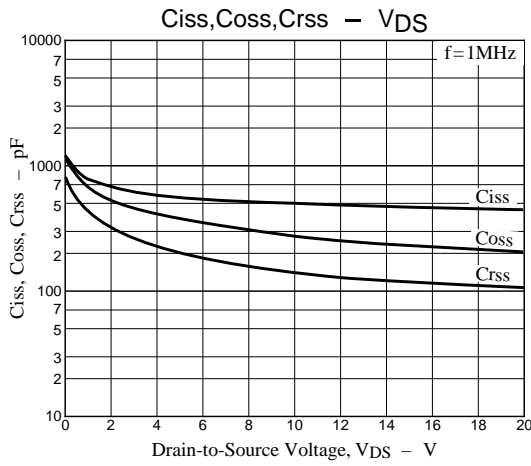
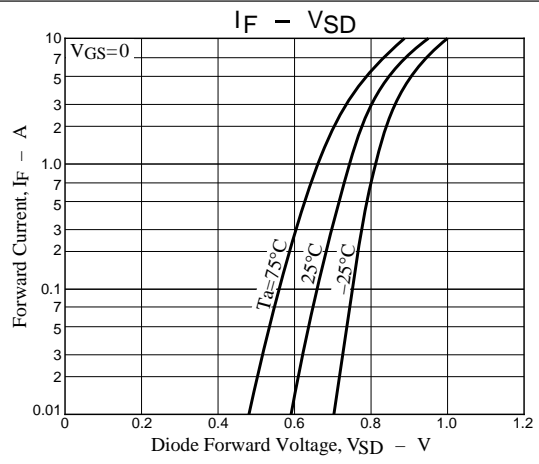
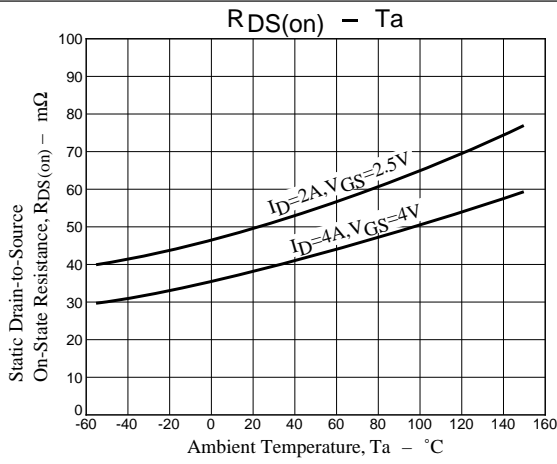
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		20		ns
Rise Time	t_r	See specified Test Circuit		200		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		80		ns
Fall Time	t_f	See specified Test Circuit		150		ns
Total Gate Charge	Qg	$V_{DS}=10V, V_{GS}=10V, I_D=4A$		22		nC
Gate-to-Source Charge	Qgs	$V_{DS}=10V, V_{GS}=10V, I_D=4A$		3		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=10V, V_{GS}=10V, I_D=4A$		3		nC
Diode Forward Voltage	V_{SD}	$I_S=4A, V_{GS}=0$		0.82	1.2	V

Switching Time Test Circuit



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