



FTS1003

Load Switching Applications

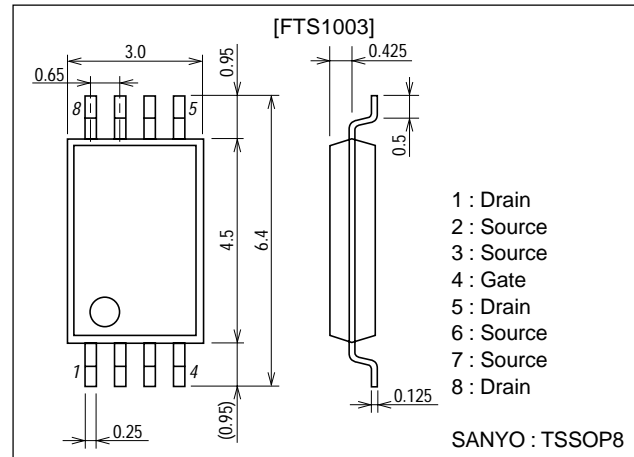
Features

- Low ON resistance.
- 2.5V drive.
- Mounting height 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_{DSS}		-20	V
Gate-to-Source Voltage	V_{GSS}		±10	V
Drain Current (DC)	I_D		-3	A
Drain Current (pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	-15	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		-1.4	V
Forward Transfer Admittance	yfs	$V_{DS}=-10V, I_D=-3A$	5	8		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=-3A, V_{GS}=-4V$		70	90	mΩ
	$R_{DS(on)2}$	$I_D=-1A, V_{GS}=-2.5V$		105	144	mΩ
Input Capacitance	Ciss	$V_{DS}=-10V, f=1MHz$		600		pF
Output Capacitance	Coss	$V_{DS}=-10V, f=1MHz$		300		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=-10V, f=1MHz$		150		pF

Marking : S1003

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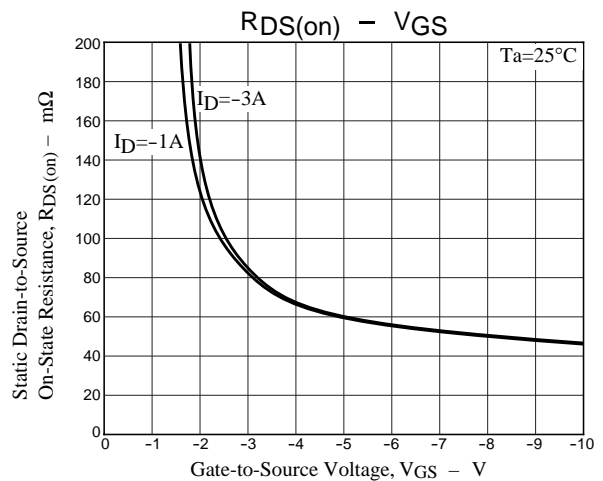
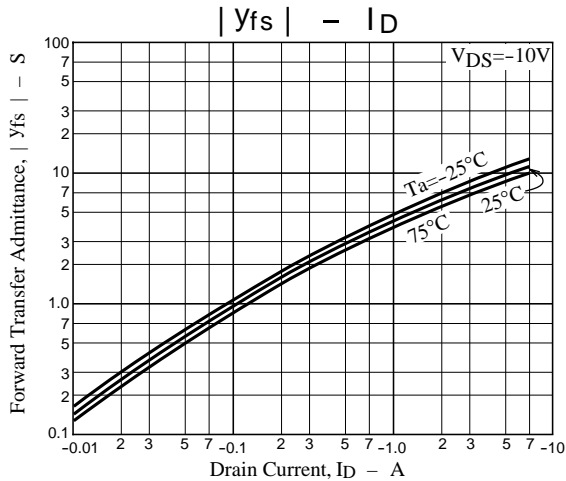
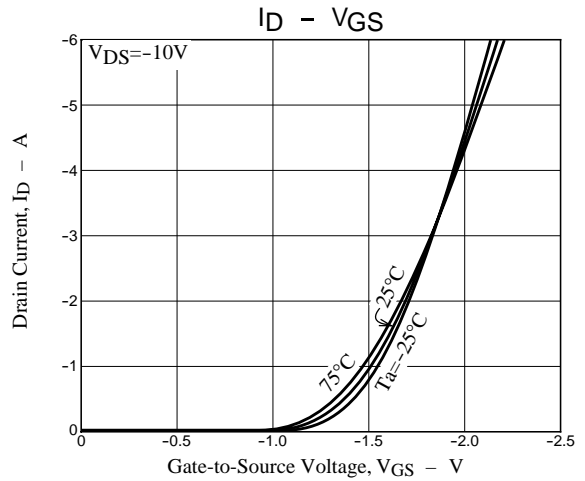
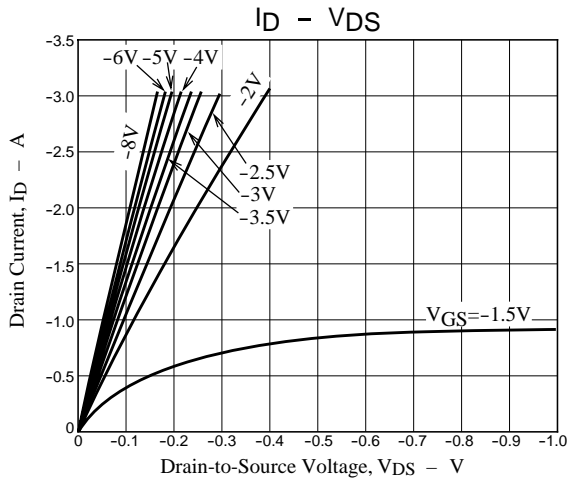
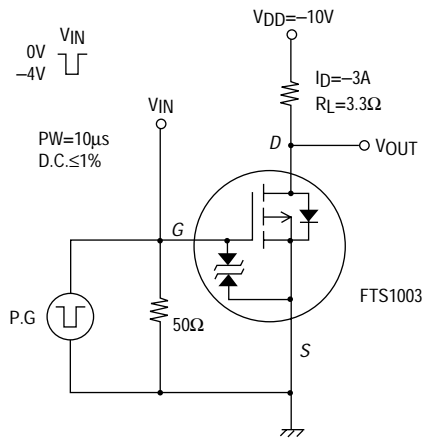
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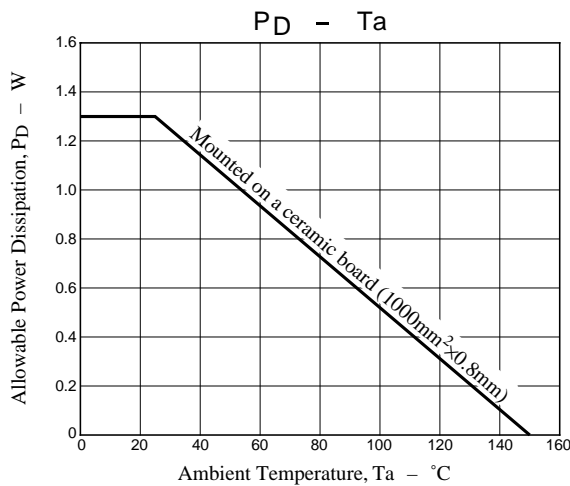
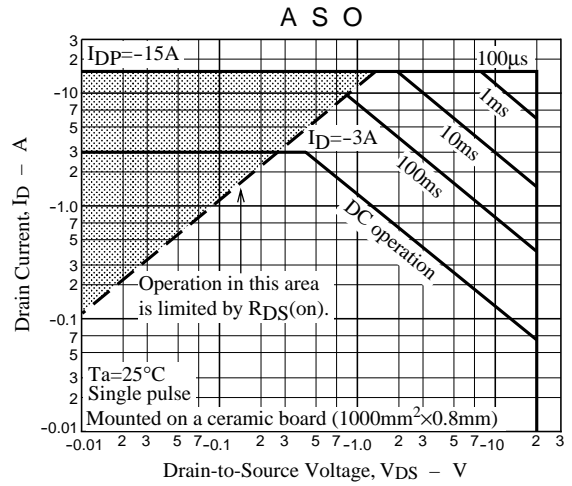
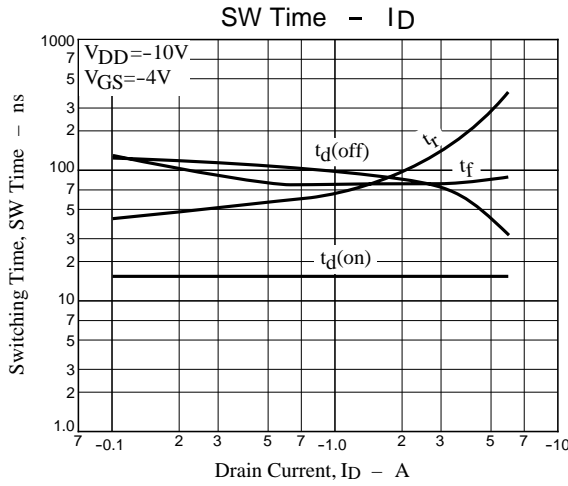
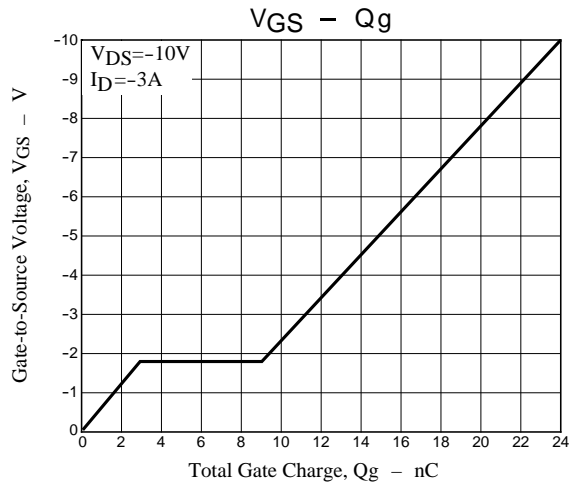
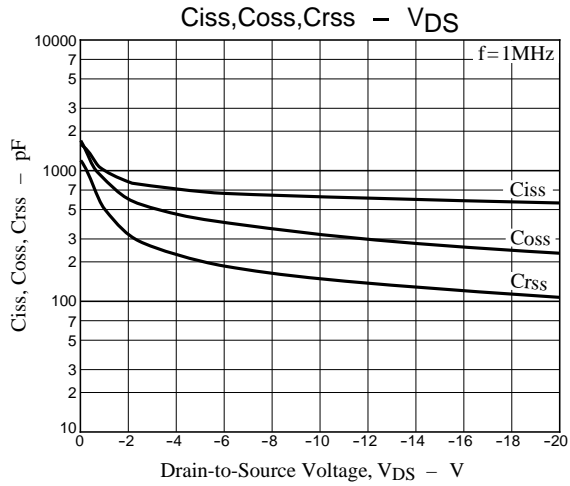
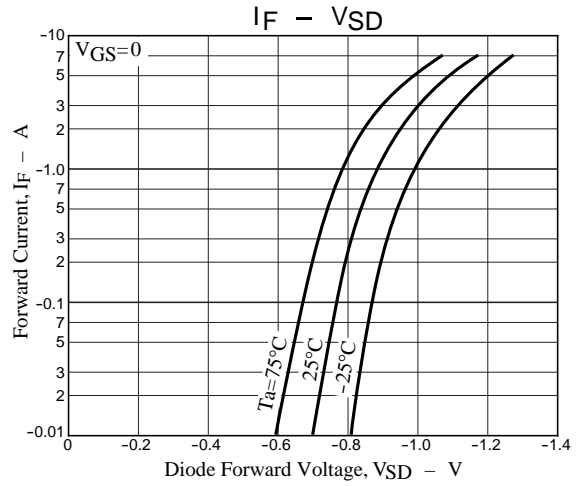
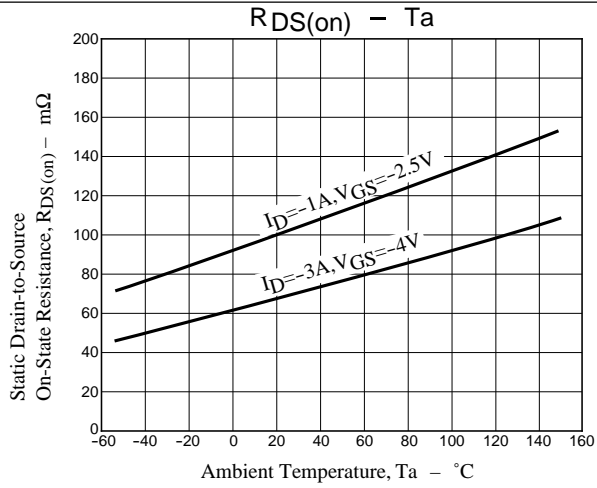
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		15		ns
Rise Time	t_r	See specified Test Circuit		140		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		80		ns
Fall Time	t_f	See specified Test Circuit		85		ns
Total Gate Charge	Q_g	$V_{DS}=-10V, V_{GS}=-10V, I_D=-3A$		24		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=-10V, V_{GS}=-10V, I_D=-3A$		3		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=-10V, V_{GS}=-10V, I_D=-3A$		6		nC
Diode Forward Voltage	V_{SD}	$I_S=-3A, V_{GS}=0$		-1.0	-1.5	V

Switching Time Test Circuit



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