



SANYO Semiconductors

DATA SHEET

FSS179 — P-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low-ON-resistance.
- 4V drive.
- Halogen free compliance.

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		-7	A
Drain Current (PW≤10s)	I _D	Duty cycle≤1%	-9	A
Drain Current (PW≤10μs)	I _{DP}	Duty cycle≤1%	-52	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (2000mm ² ×0.8mm), PW≤10s	2.2	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-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} =0V	-30			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-7A	5.4	9		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-7A, V _{GS} =-10V		21	28	mΩ
	R _{DS(on)2}	I _D =-3.5A, V _{GS} =-4.5V		32	45	mΩ
	R _{DS(on)3}	I _D =-3.5A, V _{GS} =-4V		36	51	mΩ

Marking : S179

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FSS179

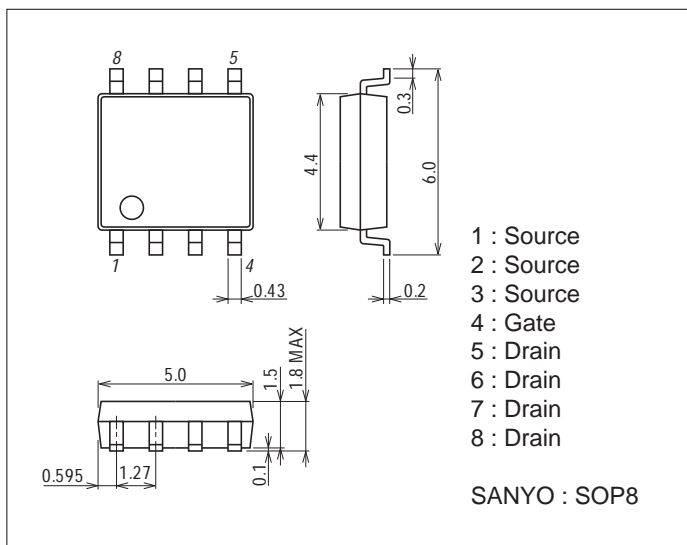
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS} = -10V, f = 1MHz$		1100		pF
Output Capacitance	Coss	$V_{DS} = -10V, f = 1MHz$		260		pF
Reverse Transfer Capacitance	Crss	$V_{DS} = -10V, f = 1MHz$		190		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		12.5		ns
Rise Time	t_r	See specified Test Circuit.		146		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		107		ns
Fall Time	t_f	See specified Test Circuit.		99		ns
Total Gate Charge	Qg	$V_{DS} = -15V, V_{GS} = -10V, I_D = -7A$		22		nC
Gate-to-Source Charge	Qgs	$V_{DS} = -15V, V_{GS} = -10V, I_D = -7A$		3.6		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS} = -15V, V_{GS} = -10V, I_D = -7A$		5.4		nC
Diode Forward Voltage	VSD	$I_S = -7A, V_{GS} = 0V$		-0.82	-1.2	V

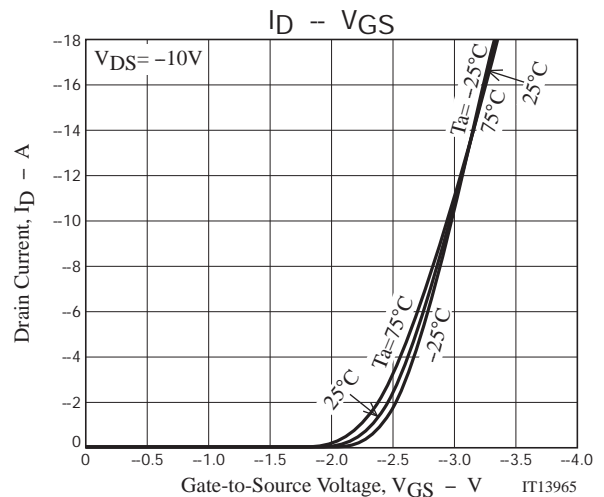
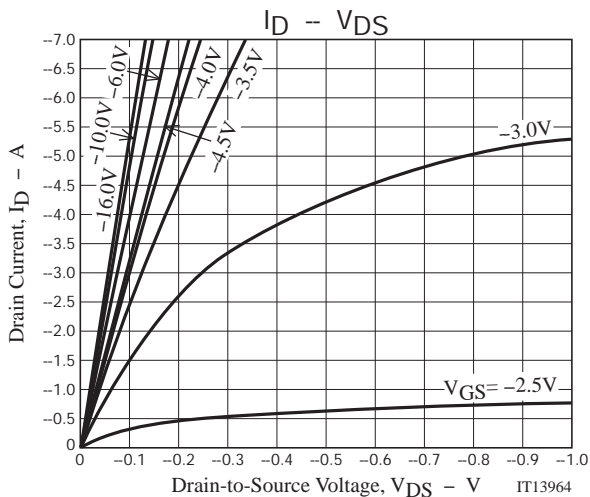
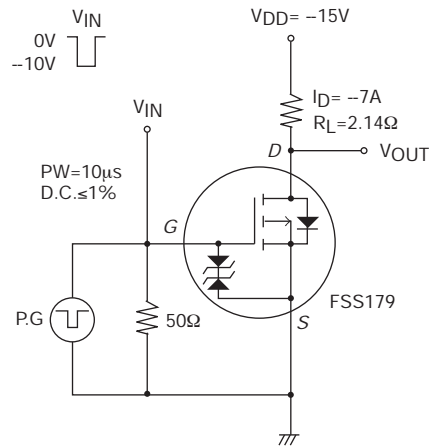
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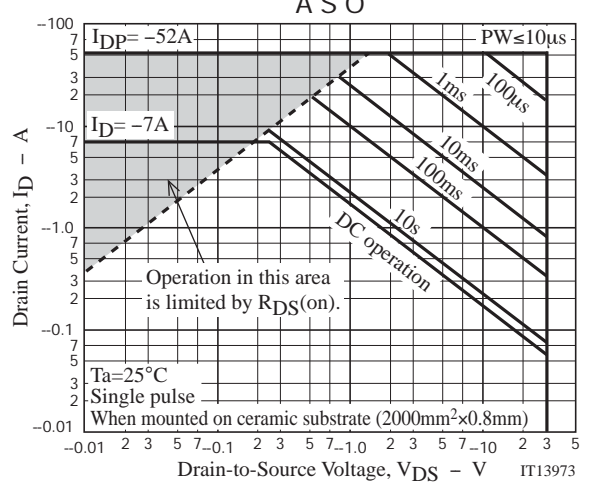
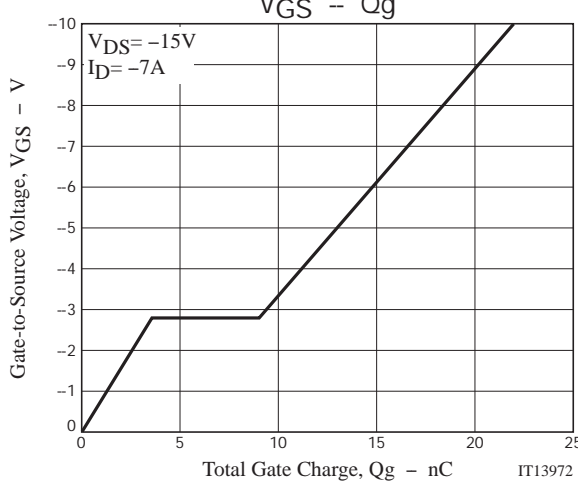
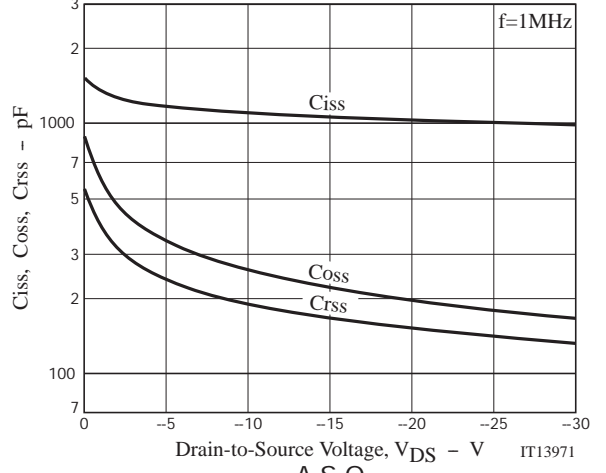
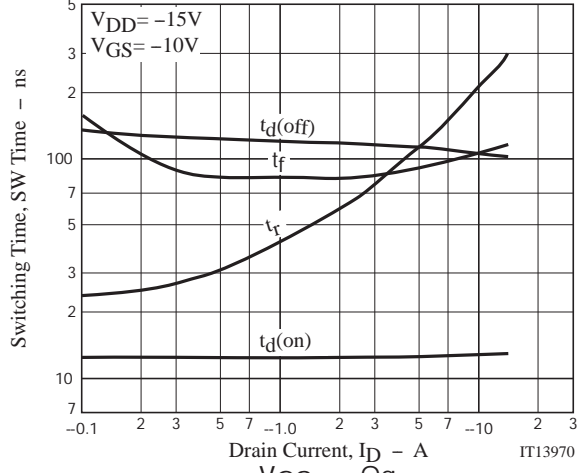
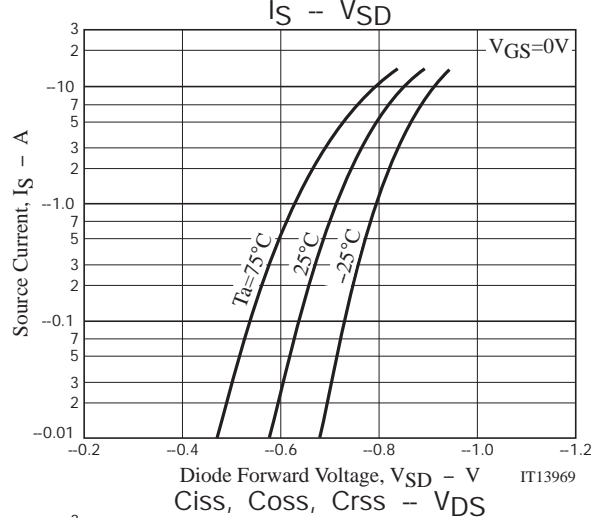
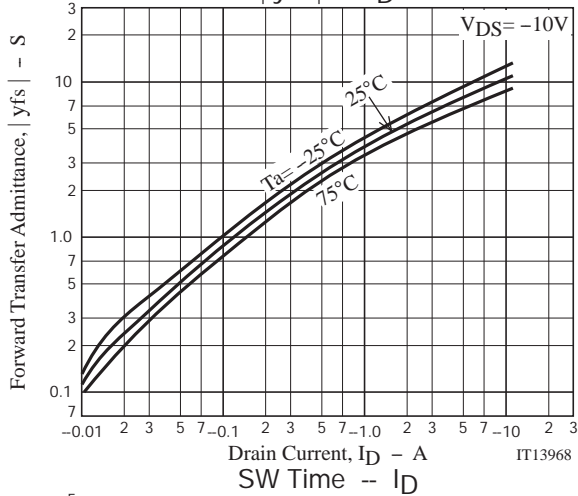
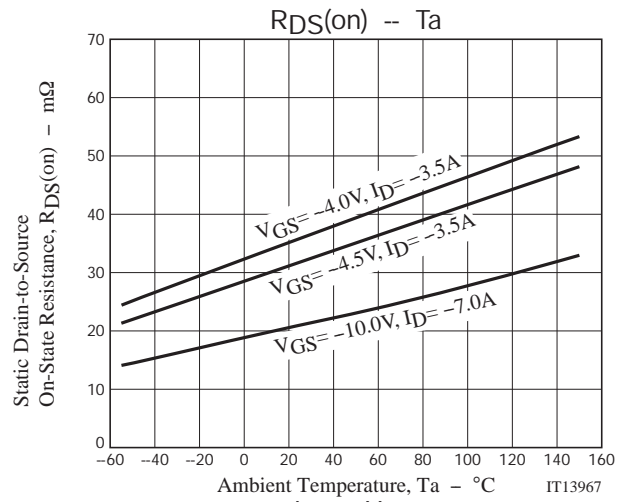
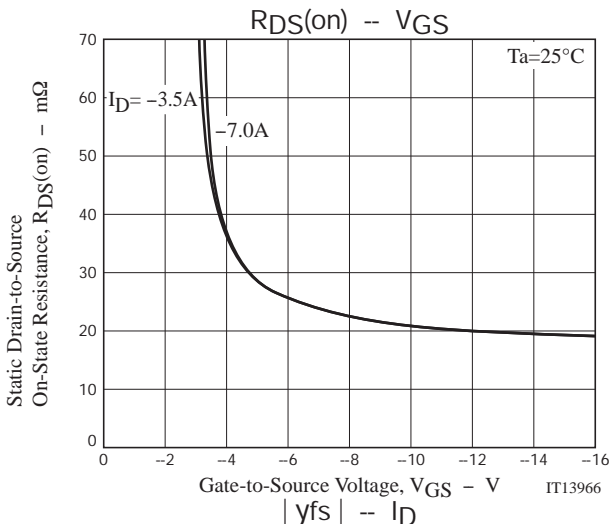
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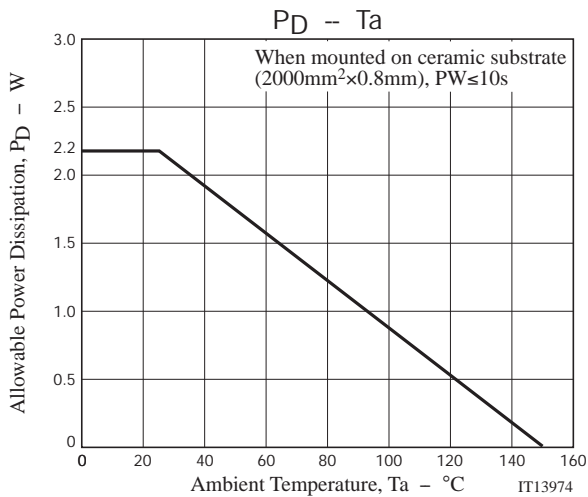
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Switching Time Test Circuit







Note on usage : Since the FSS179 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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