



FSS173 — P-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- 4V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-45	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		-6	A
Drain Current (PW≤10s)	I _D	Duty cycles≤1%	-7	A
Drain Current (PW≤10μs)	I _{DP}	Duty cycles≤1%	-24	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (1200mm ² X0.8mm), PW≤10s	2.4	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	-45			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-45V, 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 =-6A	7.2	12		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-6A, V _{GS} =-10V		26	35	mΩ
	R _{DS(on)2}	I _D =-3A, V _{GS} =-4V		40	56	mΩ
Input Capacitance	C _{iss}	V _{DS} =-20V, f=1MHz		2580		pF
Output Capacitance	C _{oss}	V _{DS} =-20V, f=1MHz		265		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-20V, f=1MHz		210		pF

Marking : S173

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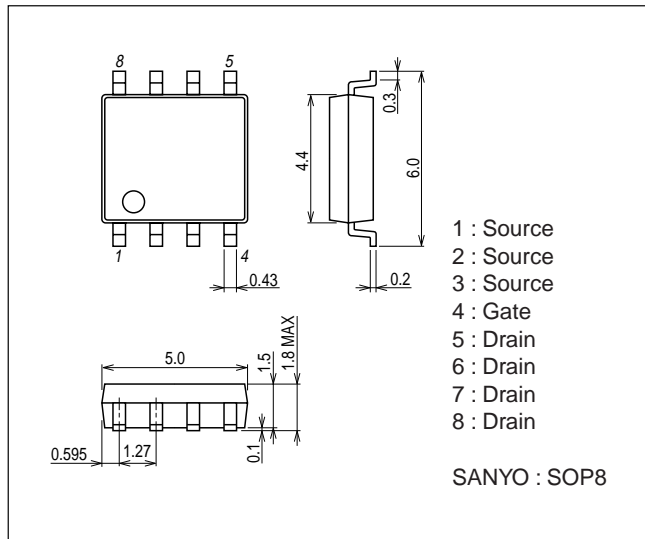
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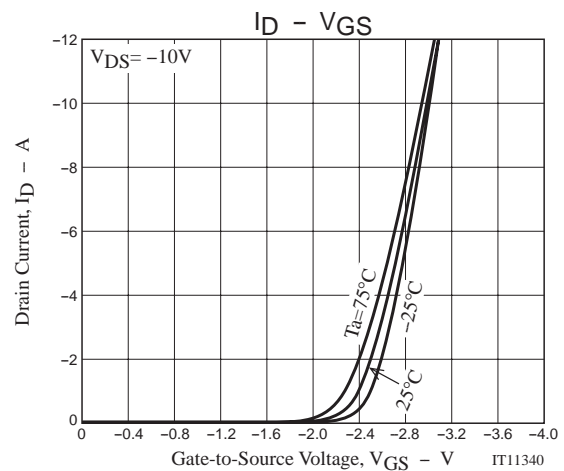
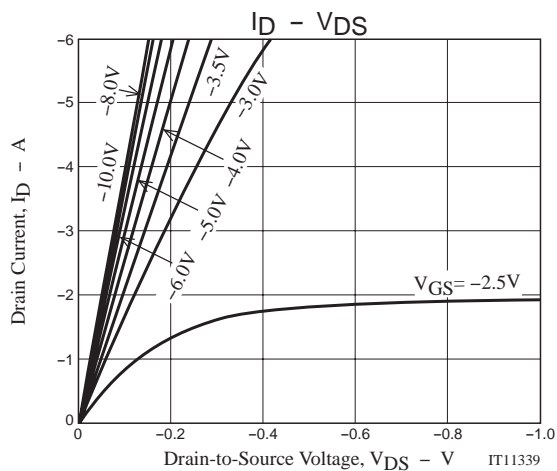
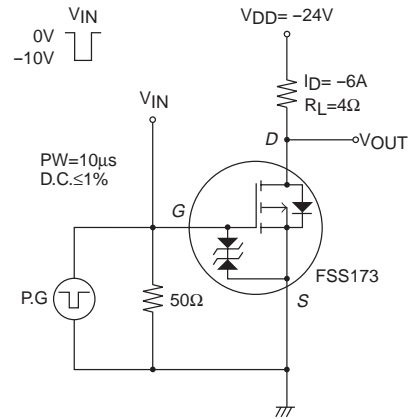
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		30		ns
Rise Time	t_r	See specified Test Circuit.		48		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		210		ns
Fall Time	t_f	See specified Test Circuit.		95		ns
Total Gate Charge	Qg	$V_{DS}=-24V, V_{GS}=-10V, I_D=-6A$		46		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-24V, V_{GS}=-10V, I_D=-6A$		7		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=-24V, V_{GS}=-10V, I_D=-6A$		8		nC
Diode Forward Voltage	V_{SD}	$I_S=-6A, V_{GS}=0V$		-0.82	-1.5	V

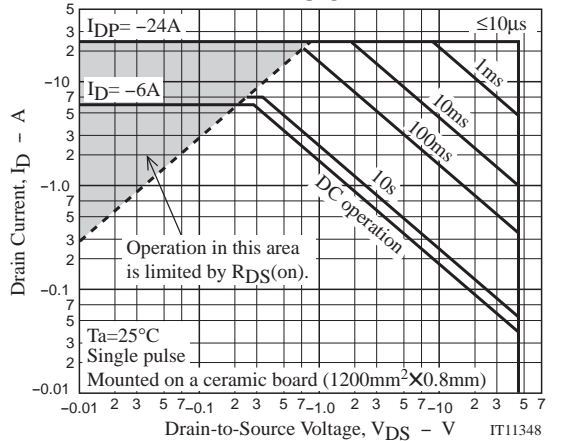
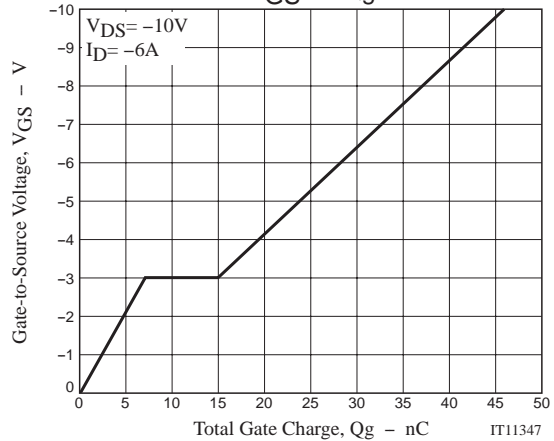
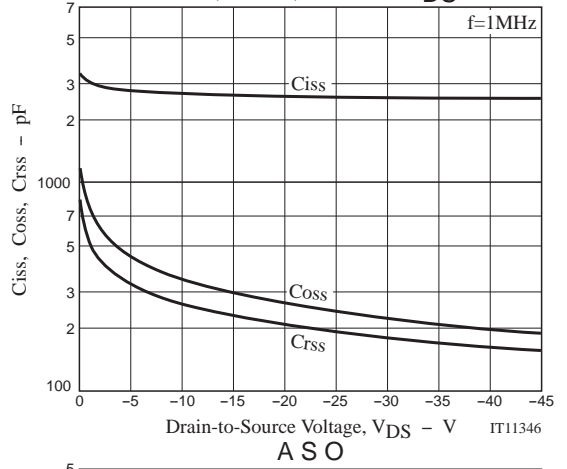
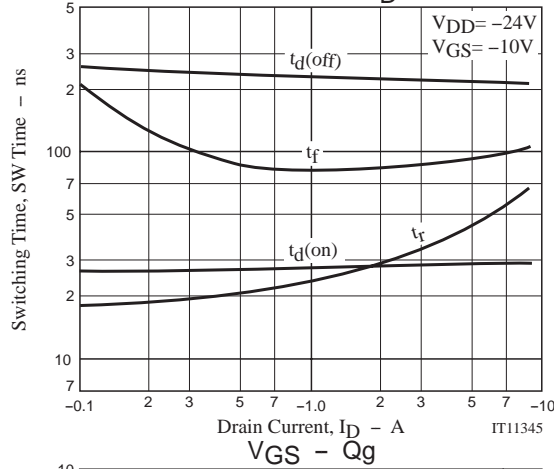
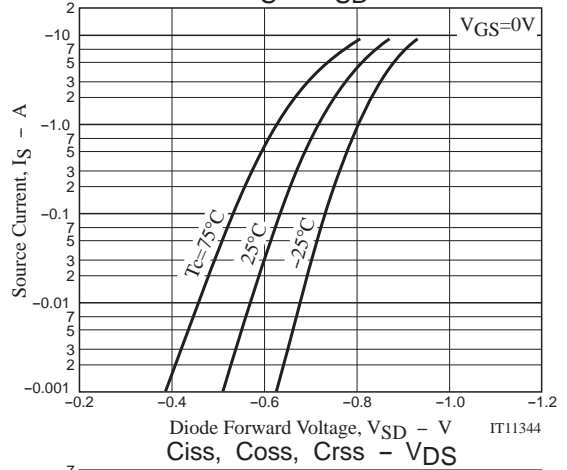
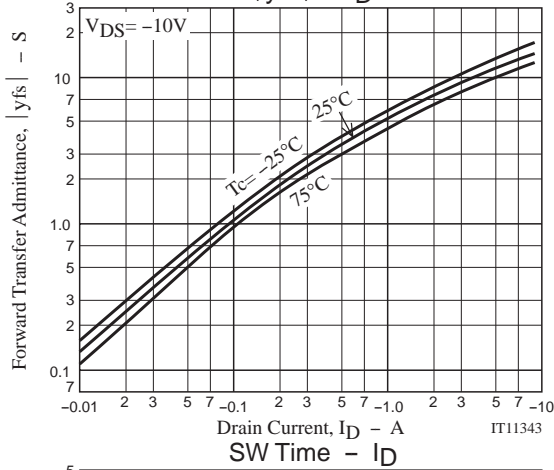
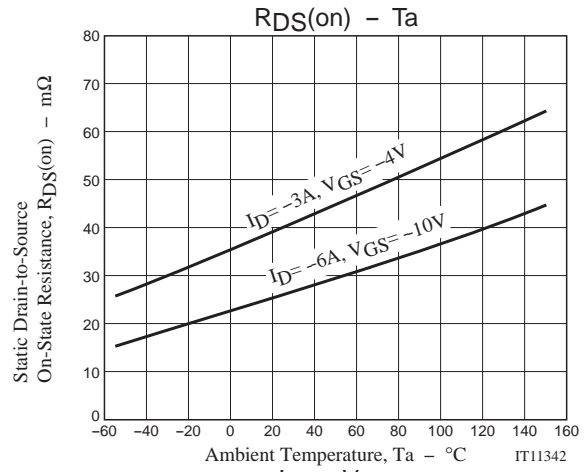
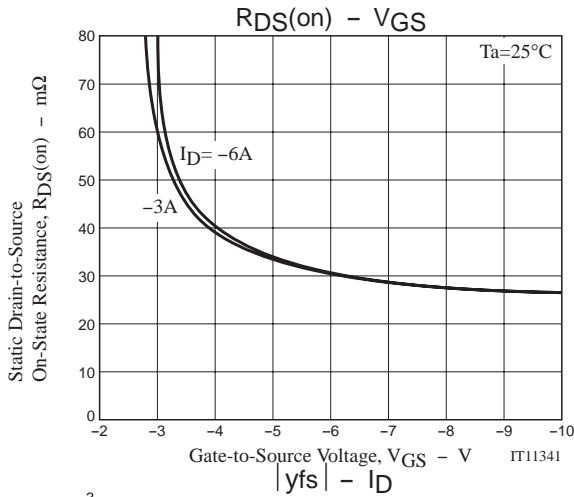
Package Dimensions

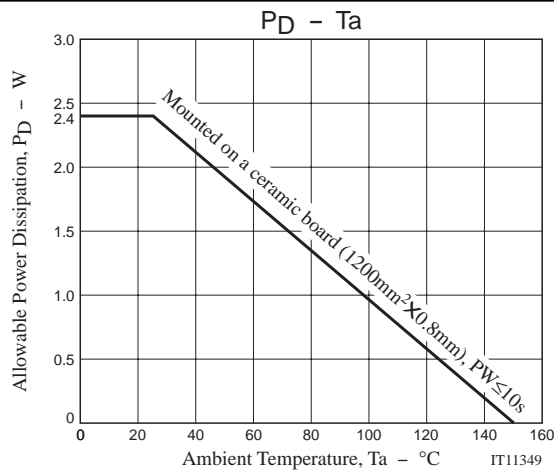
unit : mm (typ)
7005-002



Switching Time Test Circuit







Note on usage : Since the FSS173 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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