



FW812 — N-Channel Silicon MOSFET

General-Purpose Switching Device

Applications

Features

- Low ON-resistance
- 4V drive
- Composite type with 2 MOSFETs contained in a single package, facilitating high-density mounting

Specifications

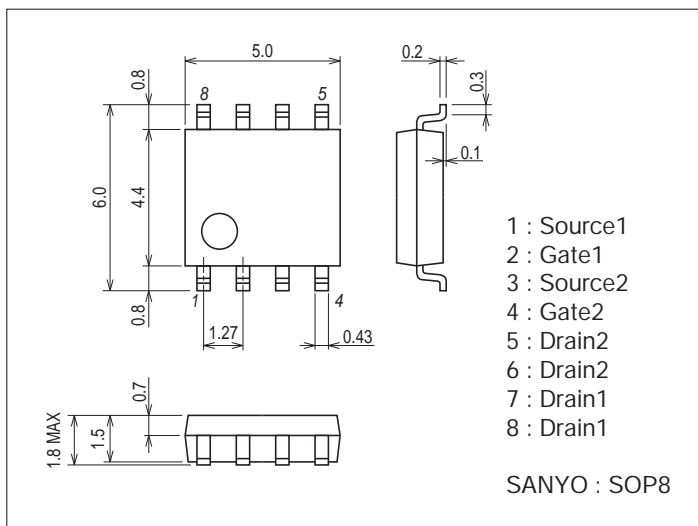
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		35	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		10	A
Drain Current (PW=10s)	I _D	Duty cycle ≤ 1%	11.5	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) 1unit, PW ≤ 10s	2.3	W
Total Dissipation	P _T	When mounted on ceramic substrate (2000mm ² × 0.8mm), PW ≤ 10s	2.5	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

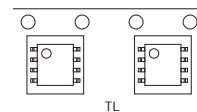
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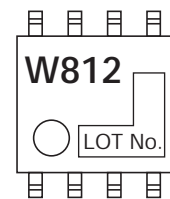
Product & Package Information

- Package : SOP8
- JEITA, JEDEC : SC-87, SOT96
- Minimum Packing Quantity : 1,000 pcs./reel

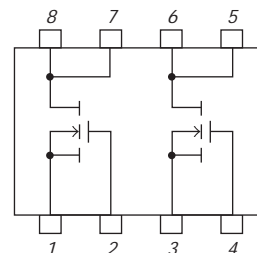
Packing Type : TL



Marking



Electrical Connection

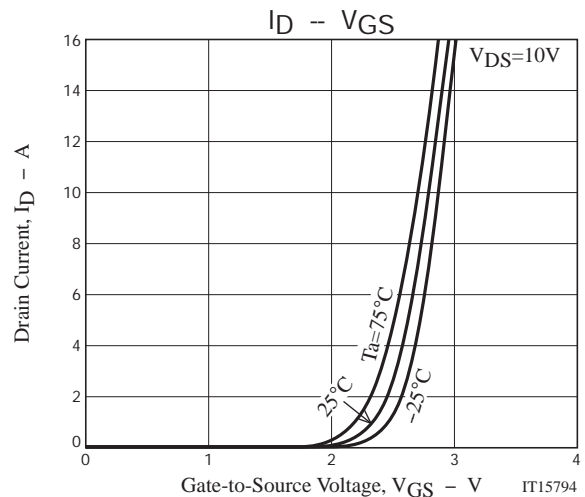
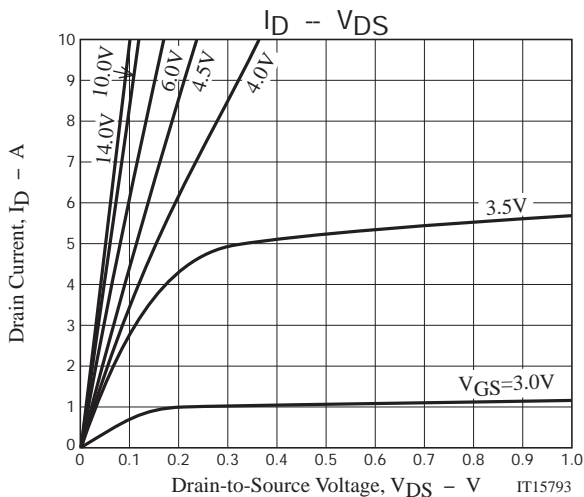
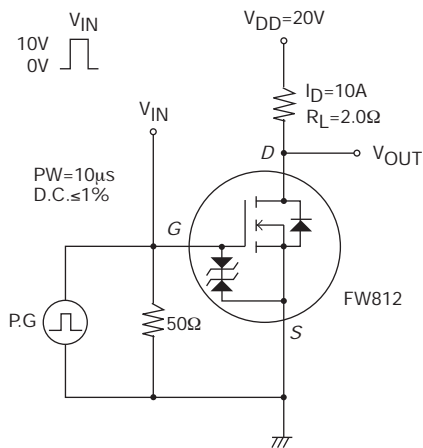


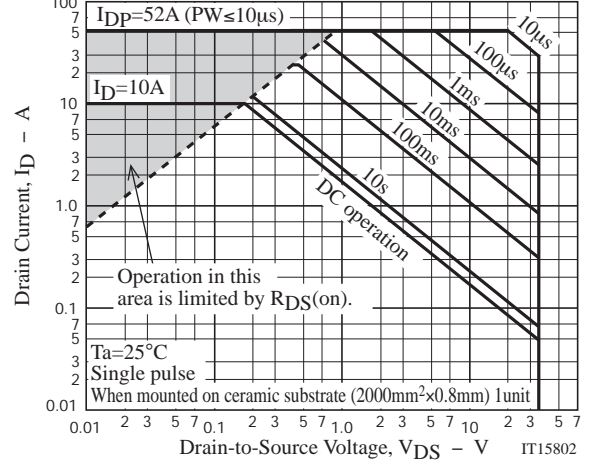
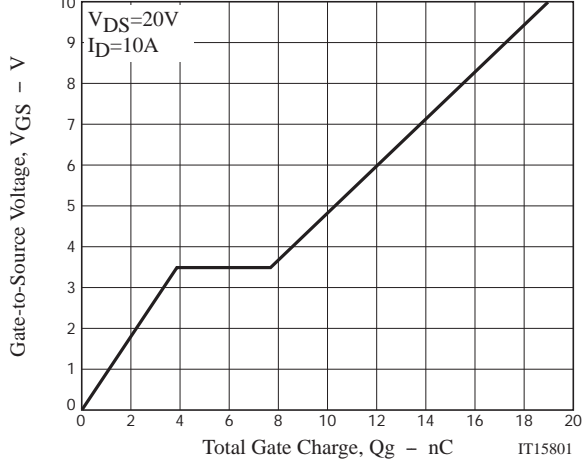
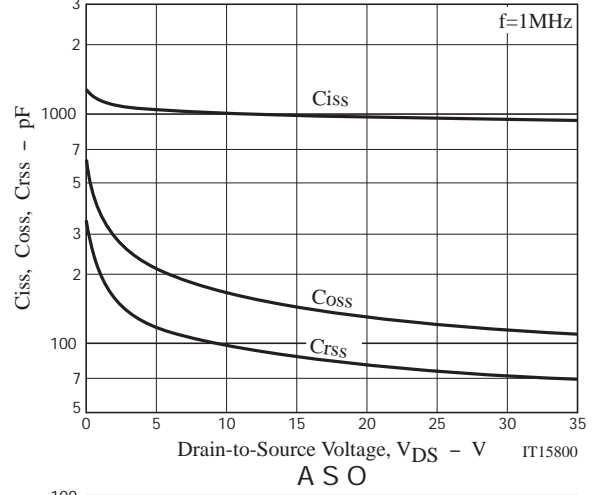
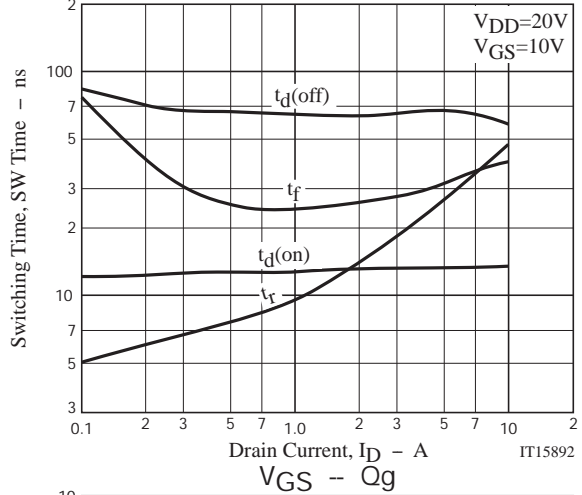
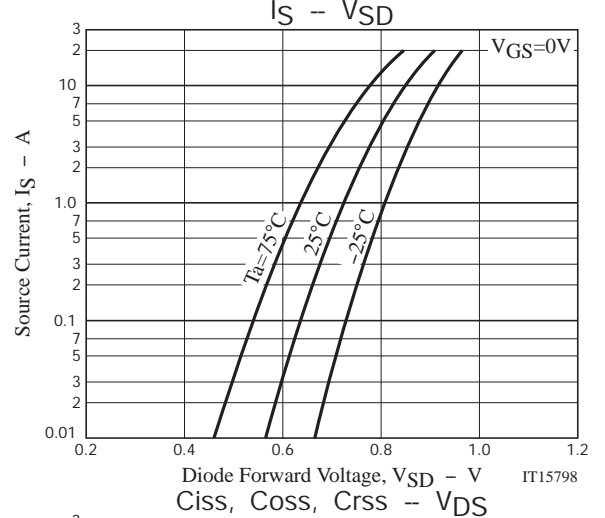
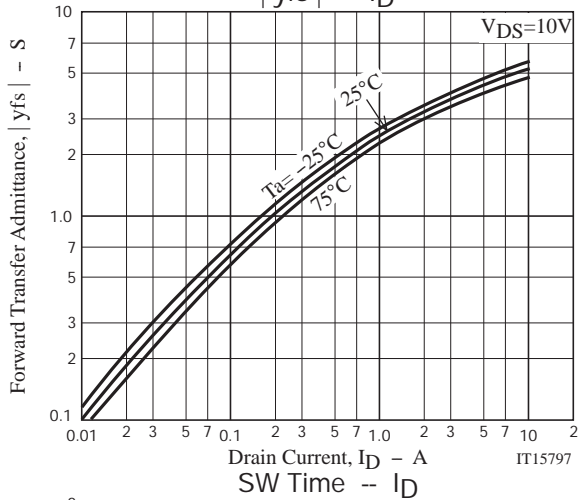
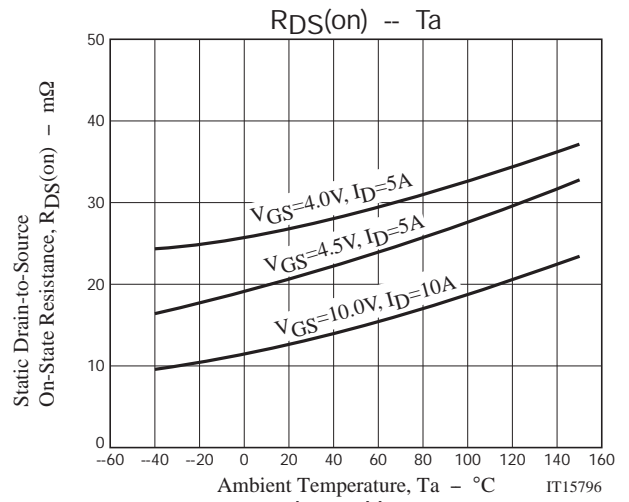
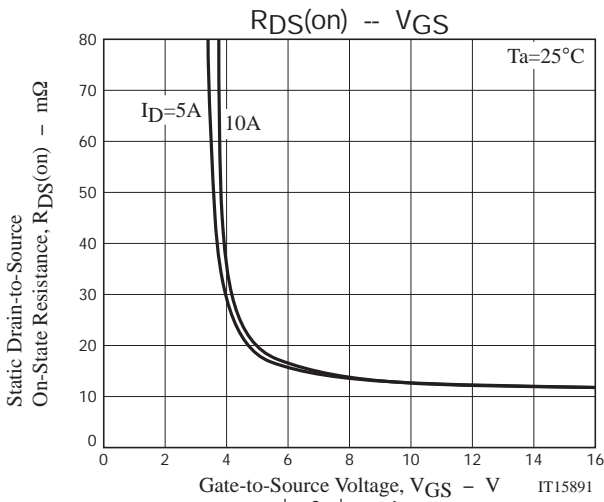
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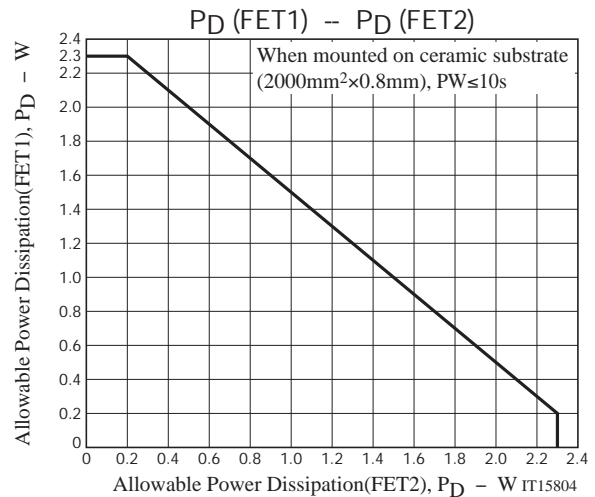
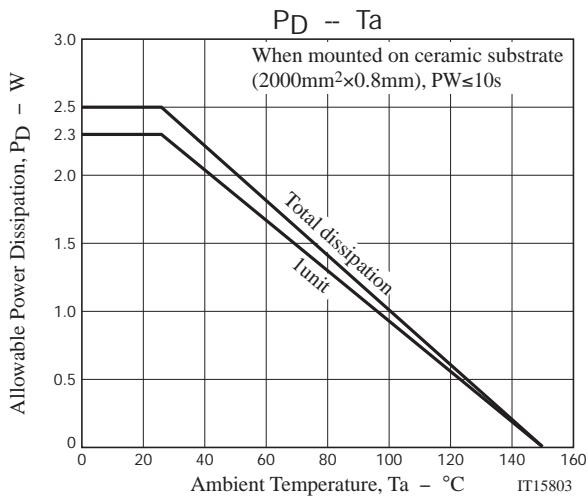
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0V$	35			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=35V, V_{GS}=0V$			1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 16V, V_{DS}=0V$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.2		2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=10A$		5.2		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=10A, V_{GS}=10V$		13	17	$m\Omega$
	$R_{DS(on)2}$	$I_D=5A, V_{GS}=4.5V$		21	30	$m\Omega$
	$R_{DS(on)3}$	$I_D=5A, V_{GS}=4V$		27	38	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		960		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		130		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		80		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		13.5		ns
Rise Time	t_r	See specified Test Circuit.		46.6		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		57.0		ns
Fall Time	t_f	See specified Test Circuit.		38.9		ns
Total Gate Charge	Q_g	$V_{DS}=20V, V_{GS}=10V, I_D=10A$		19		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=20V, V_{GS}=10V, I_D=10A$		3.9		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=20V, V_{GS}=10V, I_D=10A$		3.8		nC
Diode Forward Voltage	V_{SD}	$I_S=10A, V_{GS}=0V$		0.85	1.2	V

Switching Time Test Circuit







Note on usage : Since the FW812 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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