



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

FW217A — N-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

- On-state resistance $R_{DS(on)}=30m\Omega$ (typ.)
- 4.5V drive
- Halogen free compliance
- Protection Diode in

Specifications

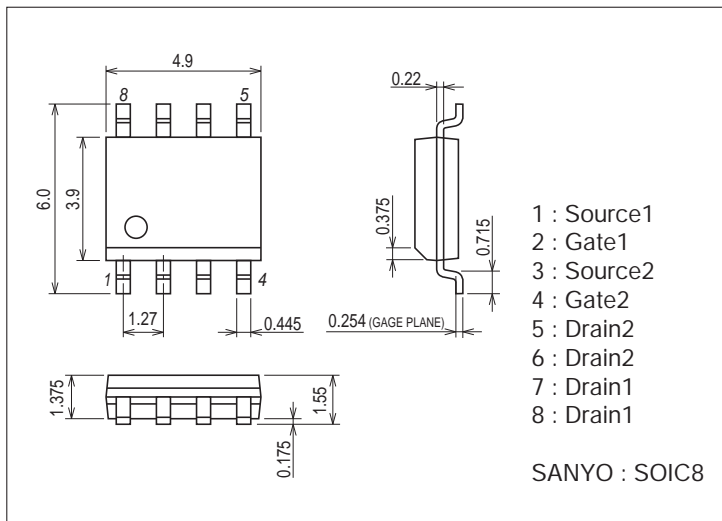
Absolute Maximum Ratings at $T_a=25^\circ C$

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		6	A
Drain Current ($PW \leq 10s$)	I_{DP}	Duty cycle $\leq 1\%$	6.5	A
Drain Current ($PW \leq 10\mu s$)	I_{DP}	Duty cycle $\leq 1\%$	24	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (2000mm ² ×0.8mm) 1unit, $PW \leq 10s$	1.8	W
Total Dissipation	P_T	When mounted on ceramic substrate (2000mm ² ×0.8mm), $PW \leq 10s$	2.2	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Package Dimensions

unit : mm (typ)

7072-001

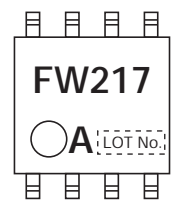
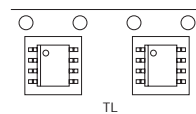


Product & Package Information

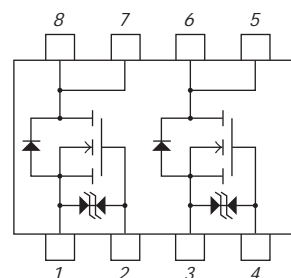
- Package : SOIC8
- JEITA, JEDEC : SC-87, SOT-96
- Minimum Packing Quantity : 2,500 pcs./reel

Packing Type : TL

Marking



Electrical Connection

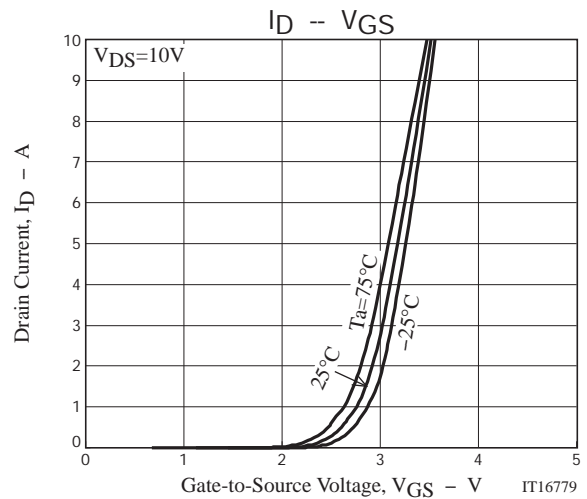
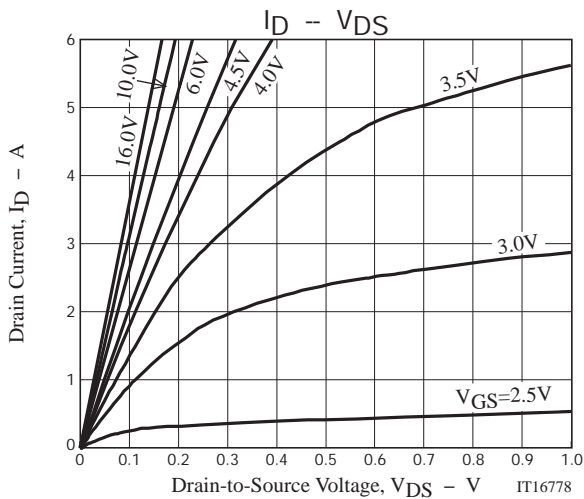
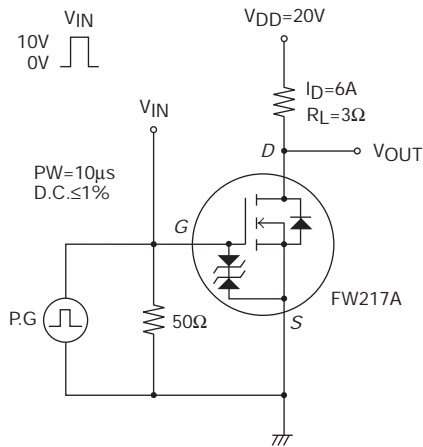


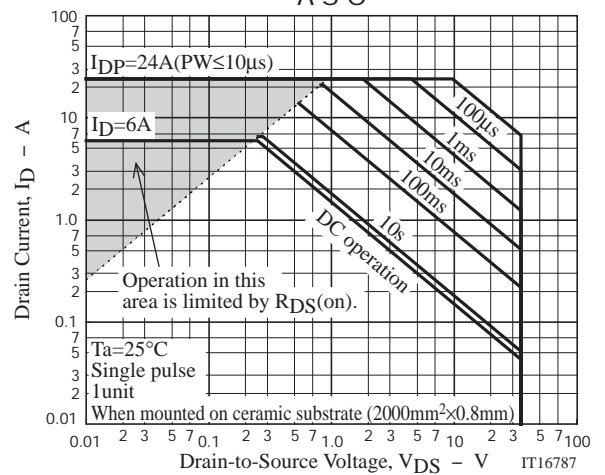
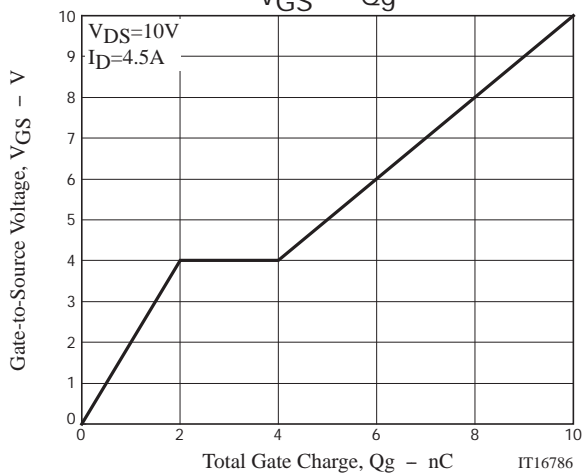
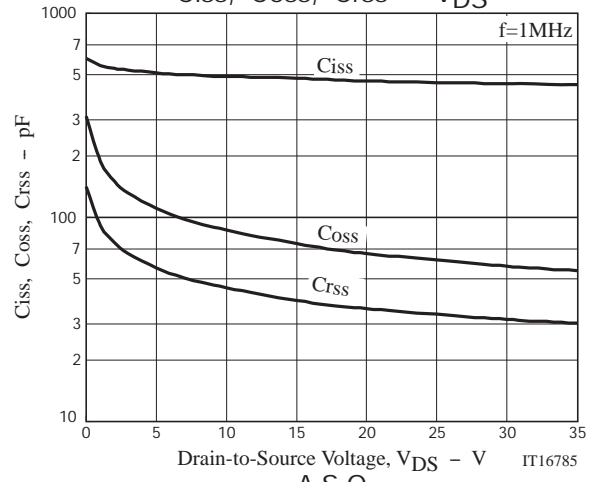
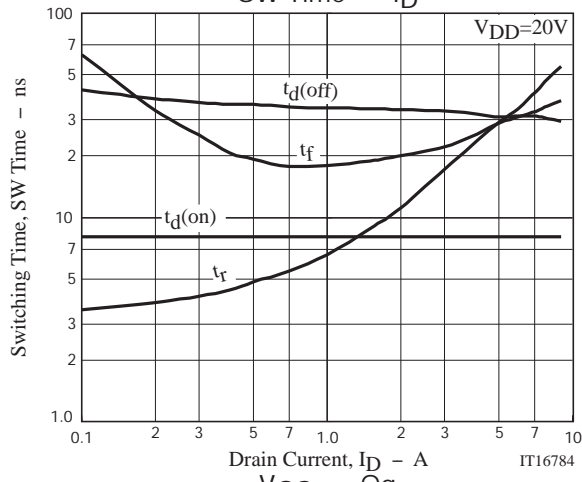
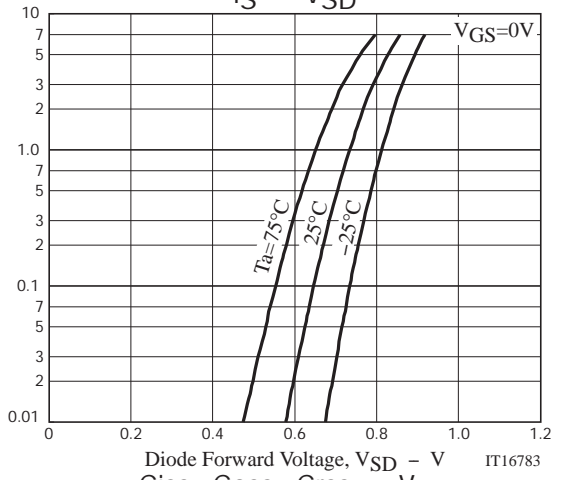
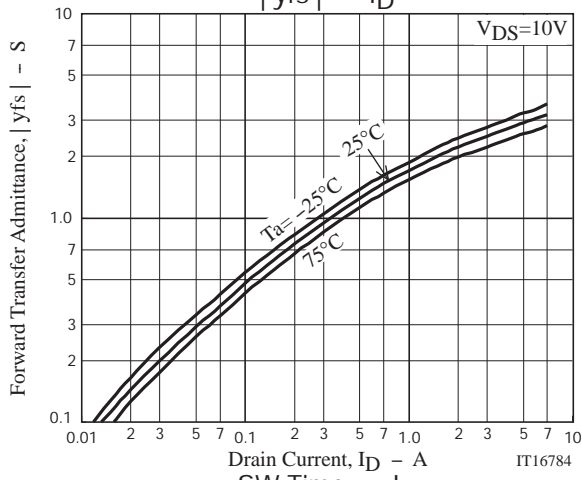
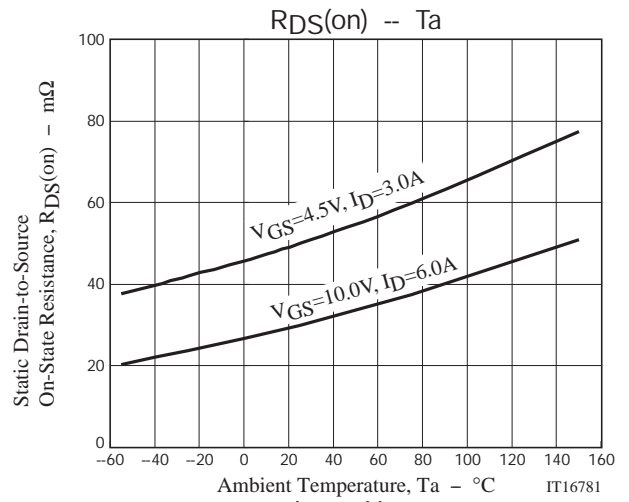
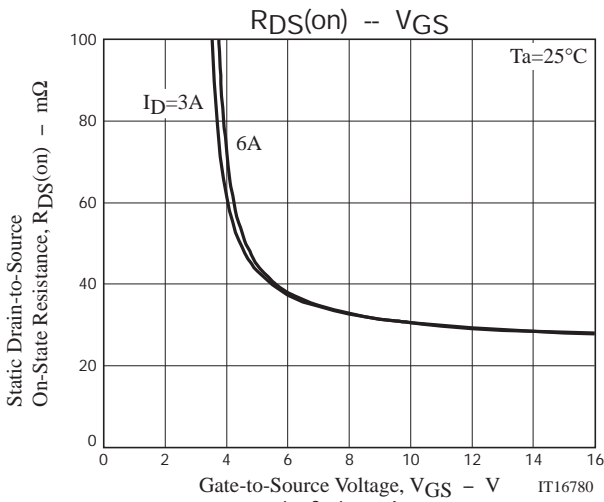
FW217A

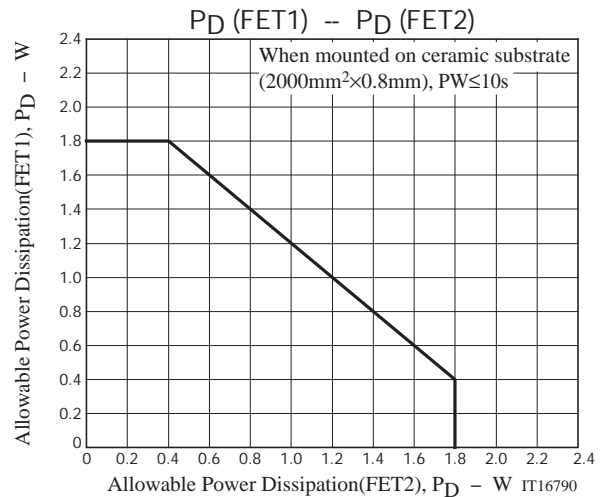
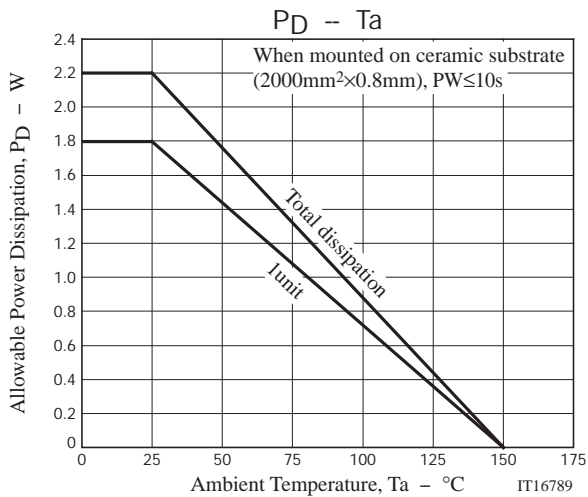
Electrical Characteristics at Ta=25°C

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	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.7		2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=6A$		3		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=6A, V_{GS}=10V$		30	39	$m\Omega$
	$R_{DS(on)2}$	$I_D=3A, V_{GS}=4.5V$		50	70	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		470		pF
Output Capacitance	C_{oss}			70		pF
Reverse Transfer Capacitance	C_{rss}			35		pF
Turn-ON Delay Time	$t_d(on)$			8		ns
Rise Time	t_r	See specified Test Circuit.		34		ns
Turn-OFF Delay Time	$t_d(off)$			31		ns
Fall Time	t_f			30		ns
Total Gate Charge	Q_g			10		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=20V, V_{GS}=10V, I_D=6A$		2		nC
Gate-to-Drain "Miller" Charge	Q_{gd}			2		nC
Diode Forward Voltage	V_{SD}	$I_S=6A, V_{GS}=0V$		0.84	1.2	V

Switching Time Test Circuit







Note on usage : Since the FW217A is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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