Ordering number : ENA0176A

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

N-Channel Silicon MOSFET

FW216A — General-Purpose Switching Device Applications

Features

- ON-resistance Nch : $R_{DS}(on)1$=49mΩ (typ.)
- 4.0V drive
- Halogen free compliance

Specifications

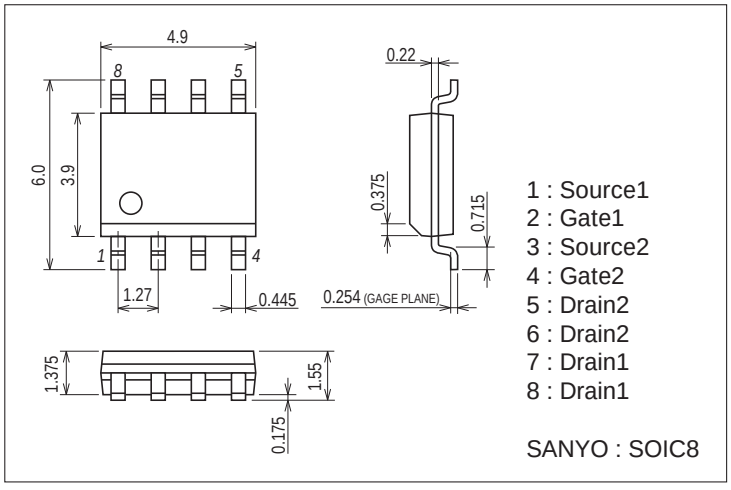
Absolute Maximum Ratings at Ta=25°C

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		4.5	A
Drain Current (PW≤10μs)	I_{DP}	Duty cycle≤1%	18	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (2000mm²×0.8mm) 1unit, PW≤10s	1.6	W
Total Dissipation	P_T	When mounted on ceramic substrate (2000mm²×0.8mm), PW≤10s	2.2	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Package Dimensions

unit : mm (typ)

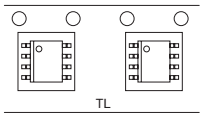
7072-001



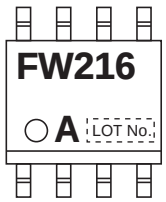
Product & Package Information

- Package : SOIC8
- JEITA, JEDEC : SC-87, SOT96
- Minimum Packing Quantity : 2,500 pcs./reel

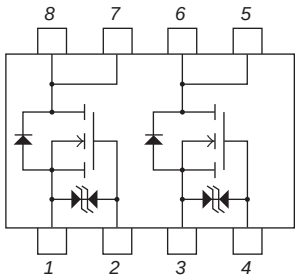
Packing Type : TL



Marking



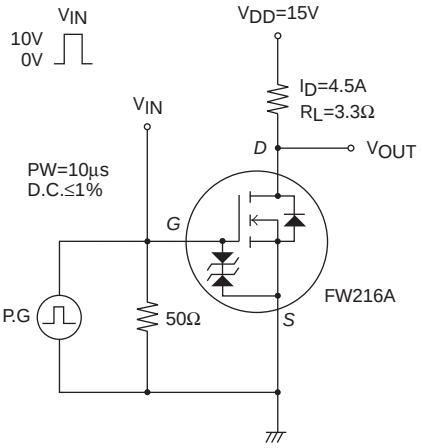
Electrical Connection

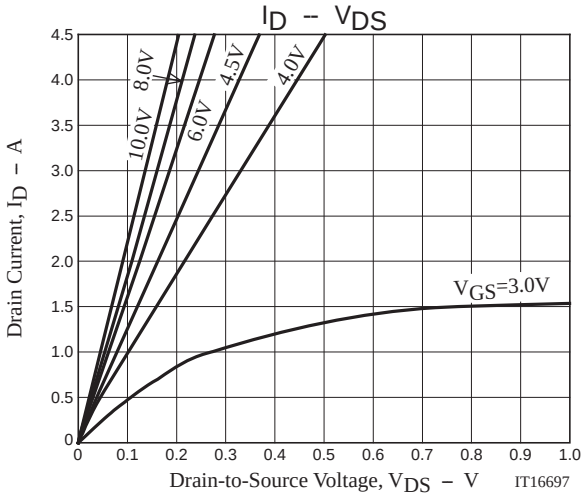


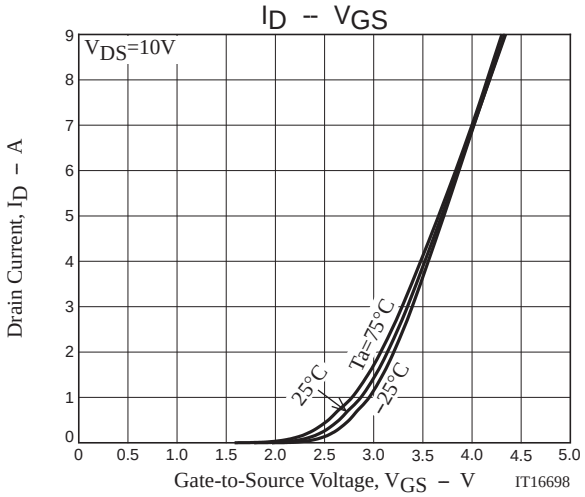
Electrical Characteristics at Ta=25°C

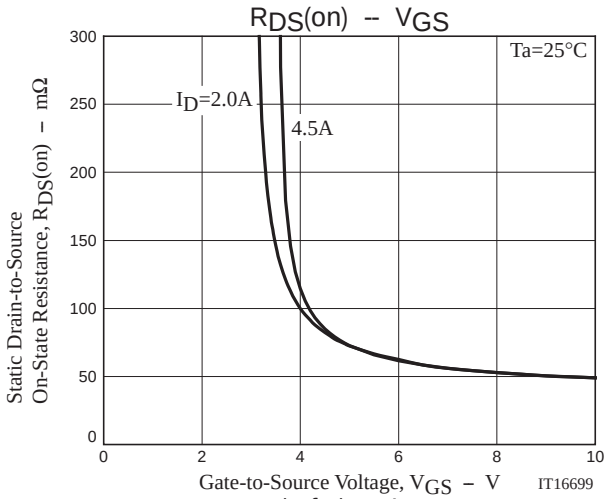
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0V	35			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=35V, V_{GS}=0V			1	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0V			±10	μA
Cutoff Voltage	$V_{GS}(off)$	V_{DS}=10V, I_D=1mA	1.5		2.5	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, I_D=4.5A		2.6		S
Static Drain-to-Source On-State Resistance	$R_{DS}(on)1$	I_D=4.5A, V_{GS}=10V		49	64	mΩ
	$R_{DS}(on)2$	I_D=2A, V_{GS}=4.5V		80	112	mΩ
	$R_{DS}(on)3$	I_D=2A, V_{GS}=4.0V		100	140	mΩ
Input Capacitance	Ciss	V_{DS}=10V, f=1MHz		280		pF
Output Capacitance	Coss			60		pF
Reverse Transfer Capacitance	Crss			30		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		6		ns
Rise Time	t_r			21		ns
Turn-OFF Delay Time	$t_d(off)$			20		ns
Fall Time	t_f			10		ns
Total Gate Charge	Qg	V_{DS}=10V, V_{GS}=10V, I_D=4.5A		5.6		nC
Gate-to-Source Charge	Qgs			1.2		nC
Gate-to-Drain “Miller” Charge	Qgd			0.8		nC
Diode Forward Voltage	V_{SD}	I_S=4.5A, V_{GS}=0V		0.85	1.2	V

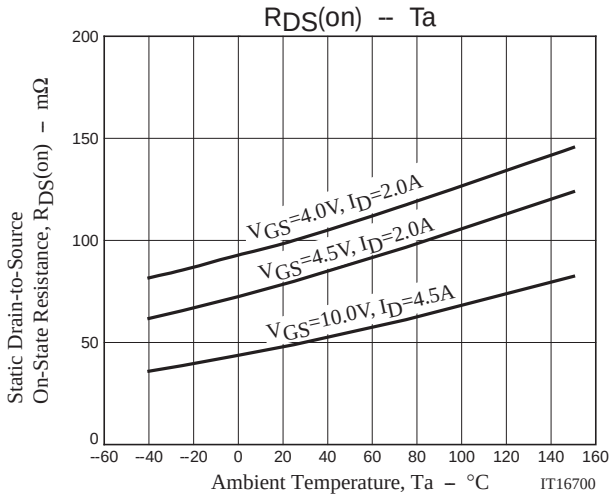
Switching Time Test Circuit

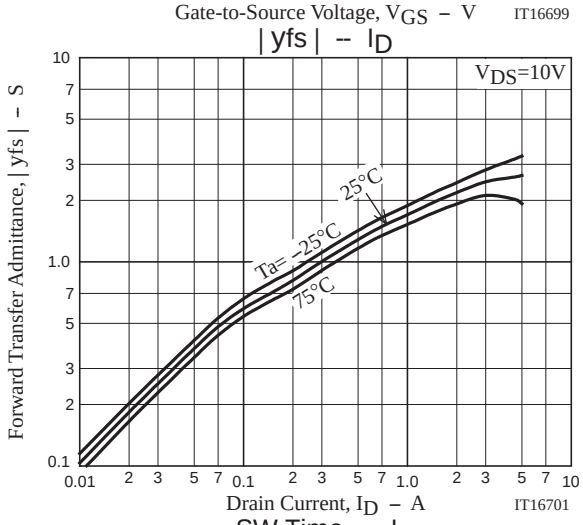


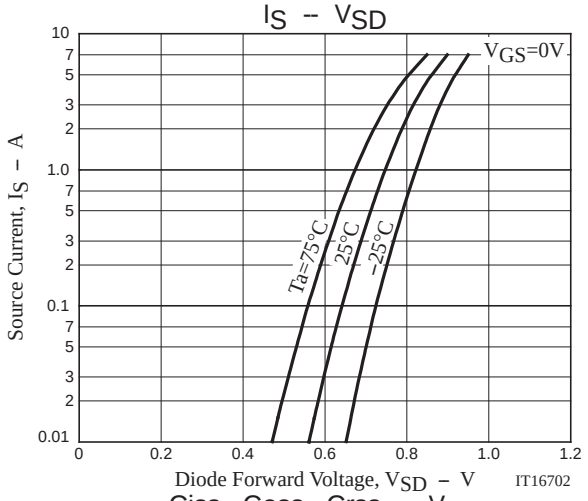


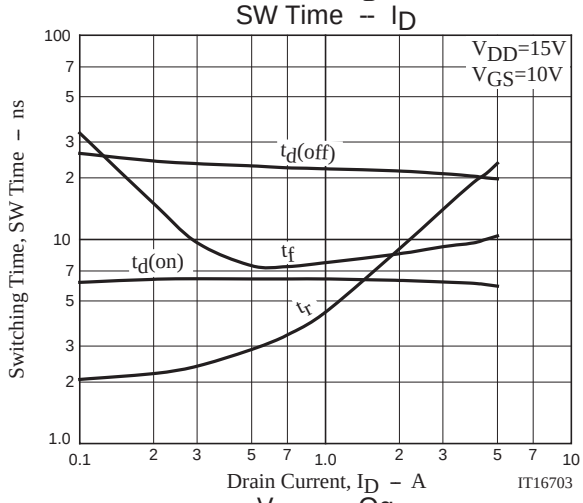


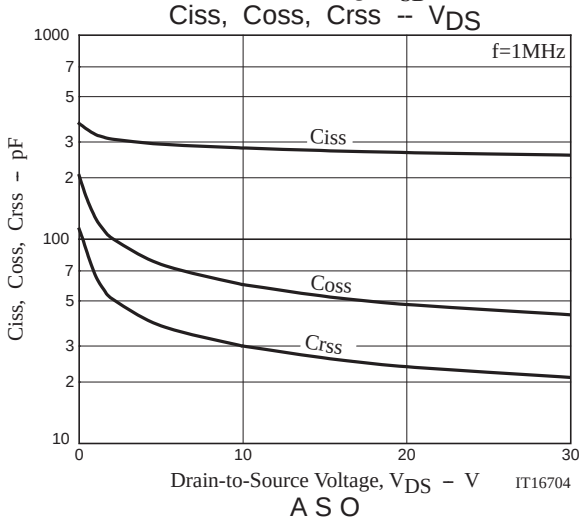


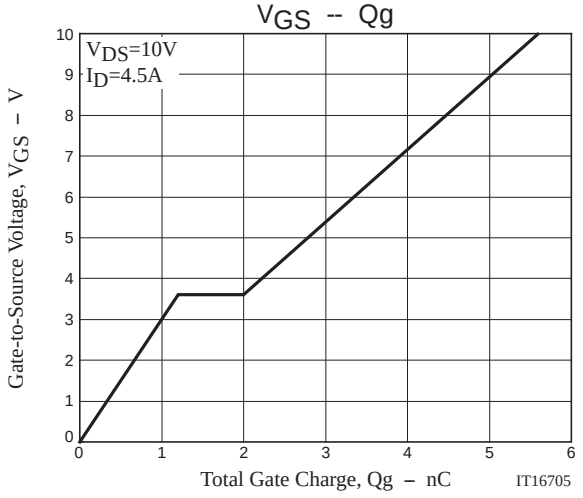


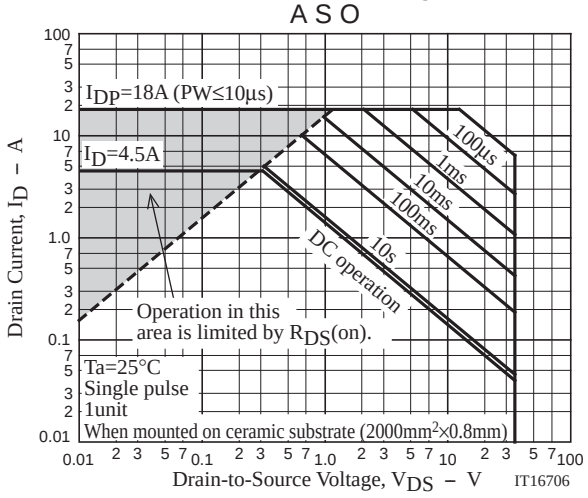


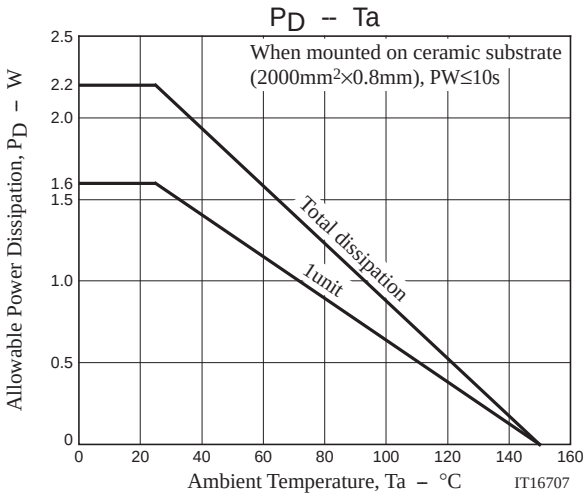


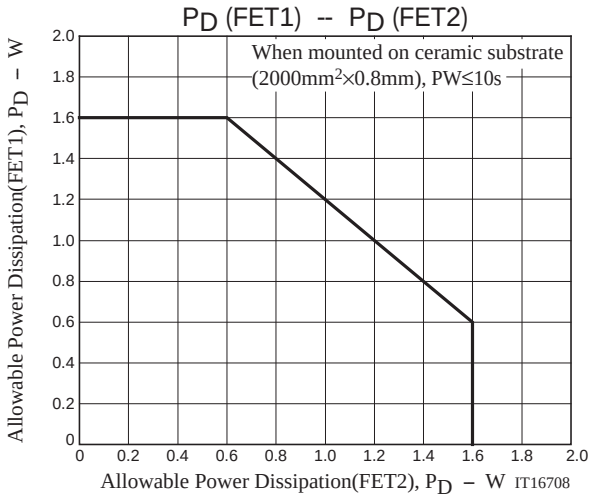












Note on usage : Since the FW216A is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

This catalog provides information as of March, 2012. Specifications and information herein are subject to change without notice.