Ordering number : ENA1805

SANYO Semiconductors
DATA SHEET

P-Channel Silicon MOSFET

FW707 — General-Purpose Switching Device Applications

Features

- Composite type with a P-channel MOSFET driving from a 4V supply voltage contained in a single package
- High-density mounting

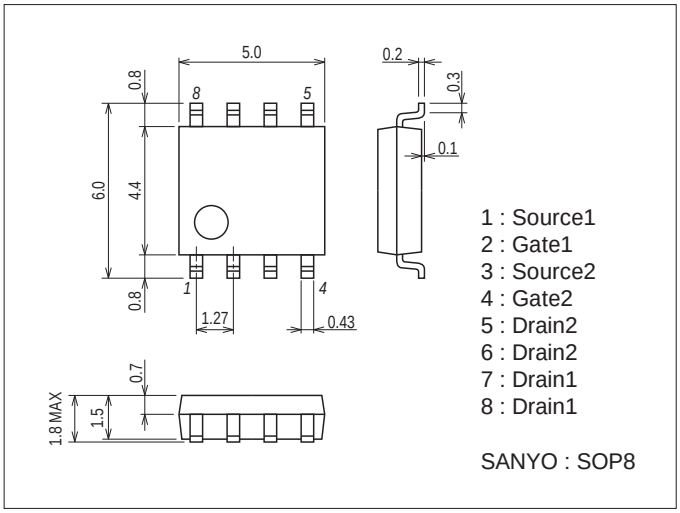
Specifications

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		−8	A
Drain Current (PW≤10s)	I_D	Duty cycle≤1%	−9	A
Drain Current (PW≤100ms)	I_D	Duty cycle≤1%	−19	A
Drain Current (PW≤10μs)	I_{DP}	Duty cycle≤1%	−52	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (2000mm²×0.8mm) 1unit, PW≤10s	2.3	W
Total Dissipation	P_T	When mounted on ceramic substrate (2000mm²×0.8mm), PW≤10s	2.5	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Package Dimensions

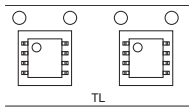
unit : mm (typ)
7005A-003



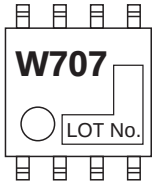
Product & Package Information

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

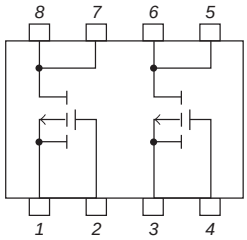
Packing Type : TL



Marking



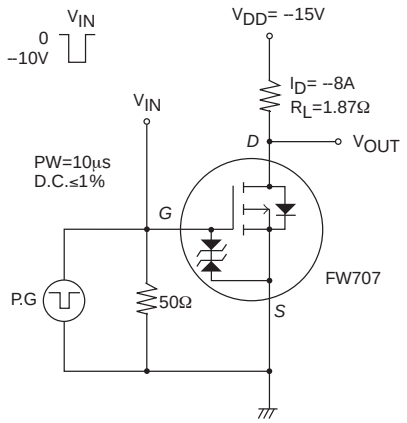
Electrical Connection

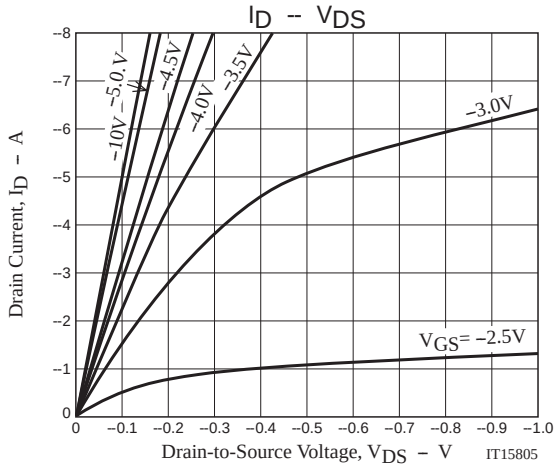


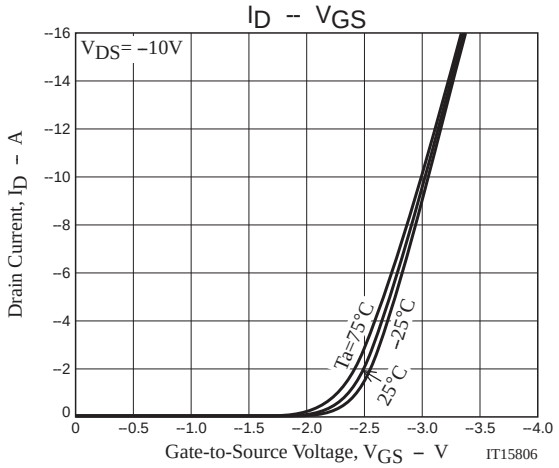
Electrical Characteristics at Ta=25°C

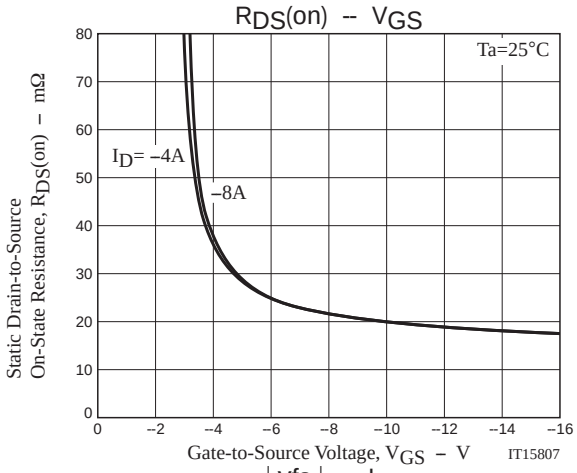
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=−1mA, V_{GS}=0V	−30			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=−30V, V_{GS}=0V			−1	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0V			±10	μA
Cutoff Voltage	V_{GS}(off)	V_{DS}=−10V, I_D=−1mA	−1.2		−2.6	V
Forward Transfer Admittance	| yfs |	V_{DS}=−10V, I_D=−8A		10		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)1	I_D=−8A, V_{GS}=−10V		20	26	mΩ
	R_{DS}(on)2	I_D=−4A, V_{GS}=−4.5V		32	45	mΩ
	R_{DS}(on)3	I_D=−4A, V_{GS}=−4V		36	51	mΩ
Input Capacitance	Ciss	V_{DS}=−10V, f=1MHz		900		pF
Output Capacitance	Coss	V_{DS}=−10V, f=1MHz		240		pF
Reverse Transfer Capacitance	Crss	V_{DS}=−10V, f=1MHz		160		pF
Turn-ON Delay Time	t_d(on)	See specified Test Circuit.		8.7		ns
Rise Time	t_r	See specified Test Circuit.		73		ns
Turn-OFF Delay Time	t_d(off)	See specified Test Circuit.		84		ns
Fall Time	t_f	See specified Test Circuit.		74		ns
Total Gate Charge	Qg	V_{DS}=−15V, V_{GS}=−10V, I_D=−8A		18		nC
Gate-to-Source Charge	Qgs	V_{DS}=−15V, V_{GS}=−10V, I_D=−8A		2.1		nC
Gate-to-Drain “Miller” Charge	Qgd	V_{DS}=−15V, V_{GS}=−10V, I_D=−8A		4.7		nC
Diode Forward Voltage	V_{SD}	I_S=−8A, V_{GS}=0V		−0.82	−1.2	V

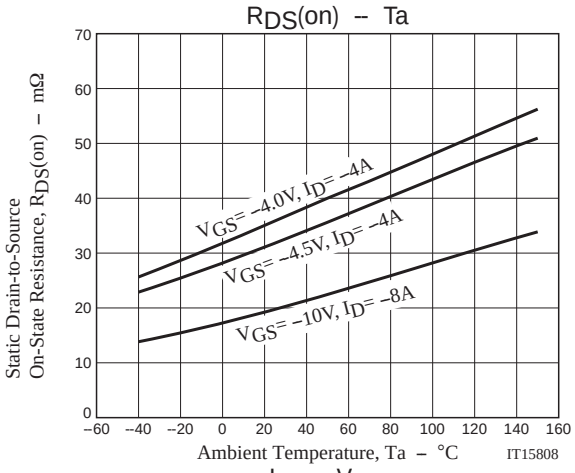
Switching Time Test Circuit

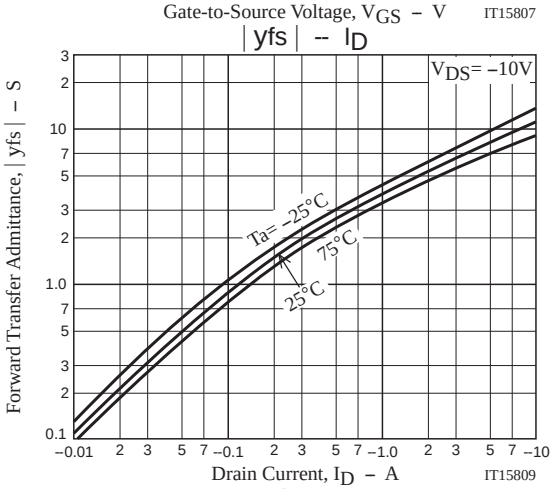


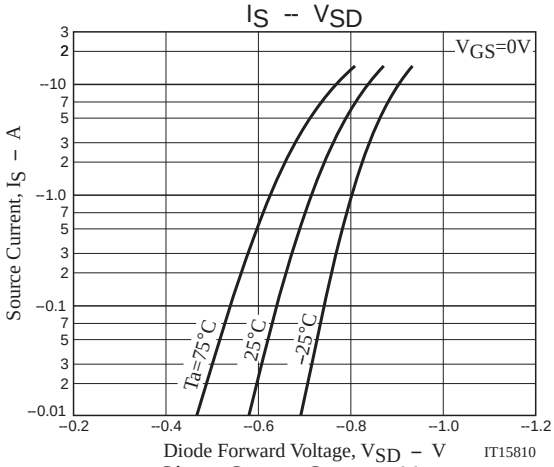


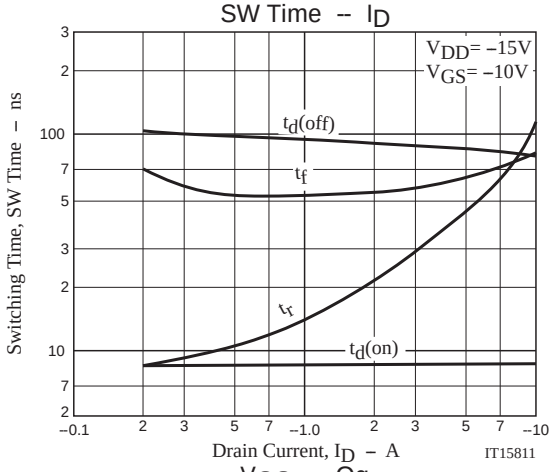


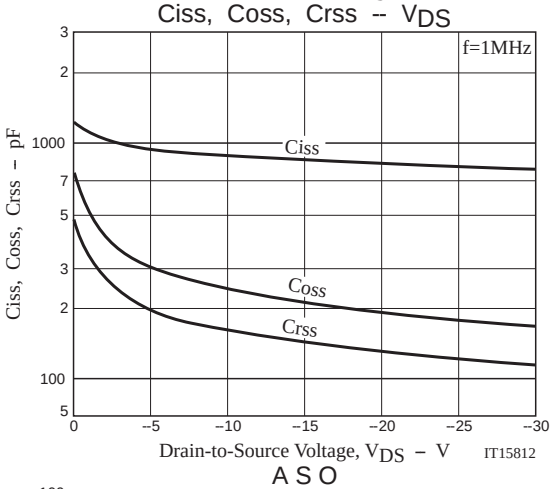


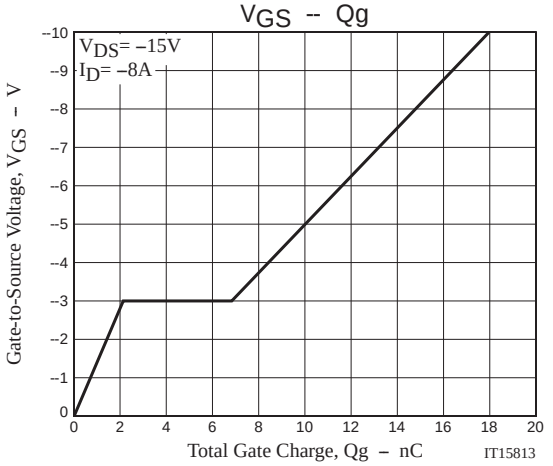


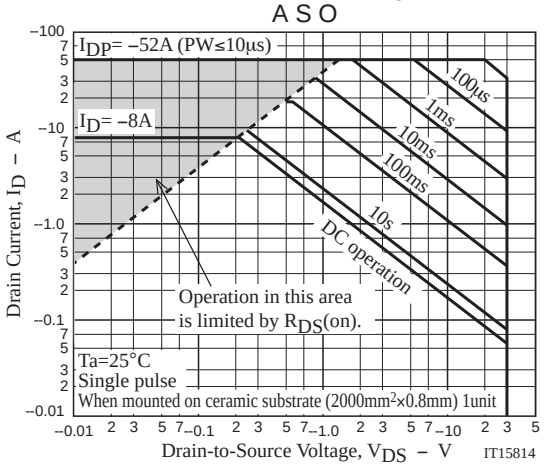


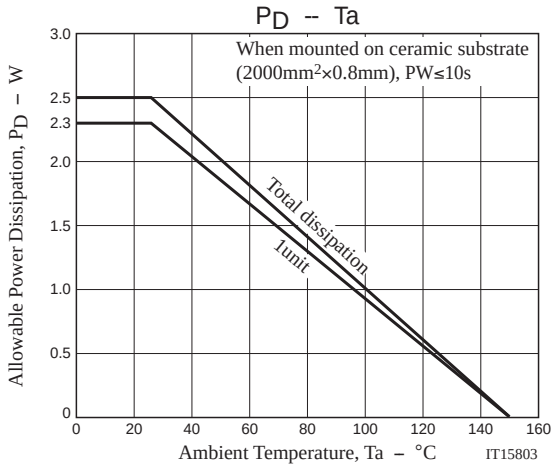


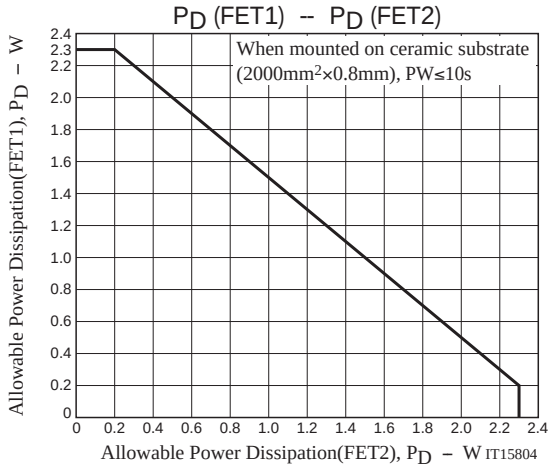












Note on usage : Since the FW707 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

This catalog provides information as of July, 2010. Specifications and information herein are subject to change without notice.