


FS5VS-18A

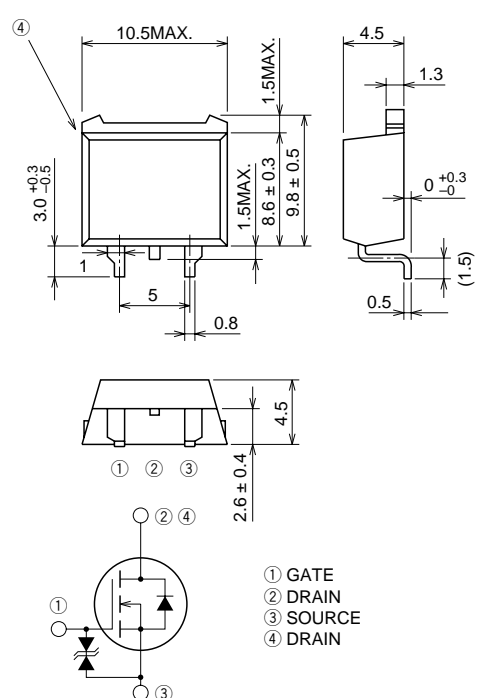
HIGH-SPEED SWITCHING USE

FS5VS-18A



- V_{DSS} 900V
- r_{DS (ON)} (MAX) 2.8Ω
- I_D 5A

OUTLINE DRAWING Dimensions in mm



① GATE
② DRAIN
③ SOURCE
④ DRAIN

TO-220S

APPLICATION

SMPS, DC-DC Converter, battery charger, power supply of printer, copier, HDD, FDD, TV, VCR, personal computer etc.

MAXIMUM RATINGS (T_c = 25°C)

Symbol	Parameter	Conditions	Ratings	Unit
V _{DSS}	Drain-source voltage	V _{GS} = 0V	900	V
V _{GSS}	Gate-source voltage	V _{DS} = 0V	±30	V
I _D	Drain current		5	A
I _{DM}	Drain current (Pulsed)		15	A
P _D	Maximum power dissipation		125	W
T _{ch}	Channel temperature		-55 ~ +150	°C
T _{stg}	Storage temperature		-55 ~ +150	°C
—	Weight	Typical value	1.2	g

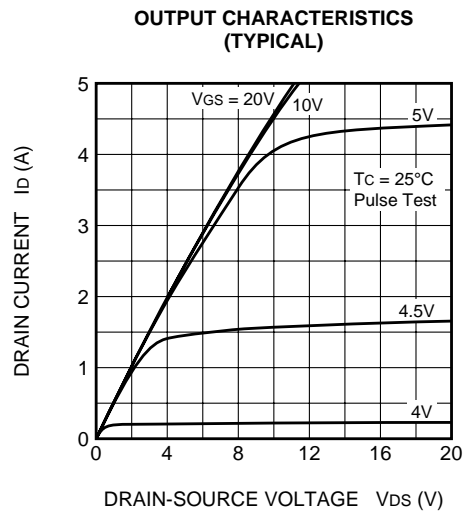
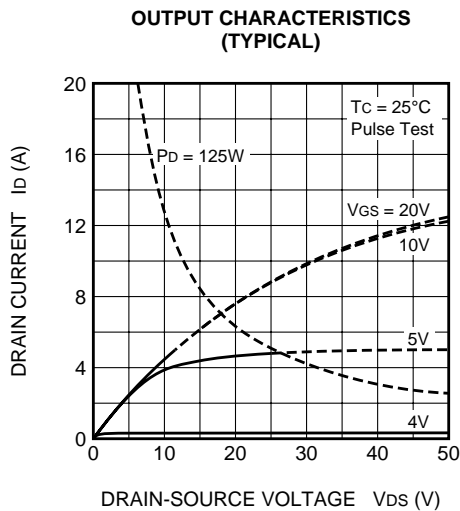
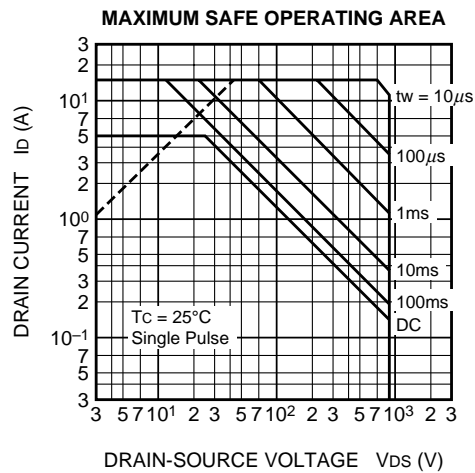
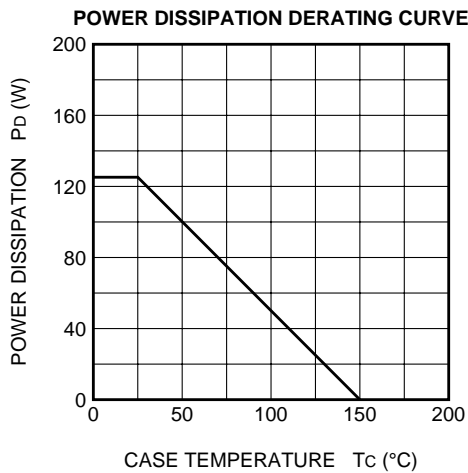
FS5VS-18A

HIGH-SPEED SWITCHING USE

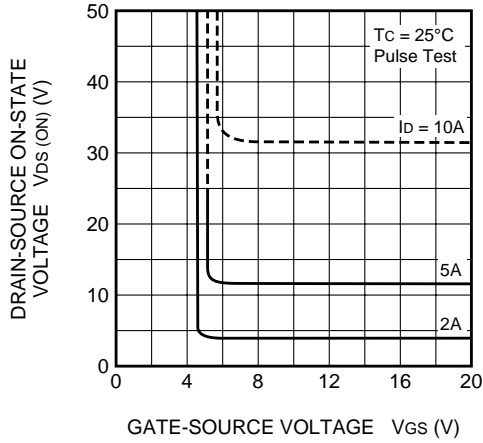
ELECTRICAL CHARACTERISTICS (T_{ch} = 25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
V (BR) DSS	Drain-source breakdown voltage	I _D = 1mA, V _{GS} = 0V	900	—	—	V
V (BR) GSS	Gate-source breakdown voltage	I _{GS} = ±100μA, V _{DS} = 0V	±30	—	—	V
I _{GSS}	Gate-source leakage current	V _{GS} = ±25V, V _{DS} = 0V	—	—	±10	μA
I _{DSS}	Drain-source leakage current	V _{DS} = 900V, V _{GS} = 0V	—	—	1	mA
V _{GS} (th)	Gate-source threshold voltage	I _D = 1mA, V _{DS} = 10V	2	3	4	V
r _{DS} (ON)	Drain-source on-state resistance	I _D = 2A, V _{GS} = 10V	—	2.15	2.80	Ω
V _{DS} (ON)	Drain-source on-state voltage	I _D = 2A, V _{GS} = 10V	—	4.30	5.60	V
y _{fs}	Forward transfer admittance	I _D = 2A, V _{DS} = 10V	3.0	5.0	—	S
C _{iss}	Input capacitance	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz	—	1050	—	pF
C _{oss}	Output capacitance		—	100	—	pF
C _{rss}	Reverse transfer capacitance		—	20	—	pF
t _d (on)	Turn-on delay time		—	20	—	ns
t _r	Rise time	V _{DD} = 200V, I _D = 2A, V _{GS} = 10V, R _{GEN} = R _{GS} = 50Ω	—	18	—	ns
t _d (off)	Turn-off delay time		—	110	—	ns
t _f	Fall time		—	35	—	ns
V _{SD}	Source-drain voltage	I _S = 2A, V _{GS} = 0V	—	1.0	1.5	V
R _{th} (ch-c)	Thermal resistance	Channel to case	—	—	1.0	°C/W

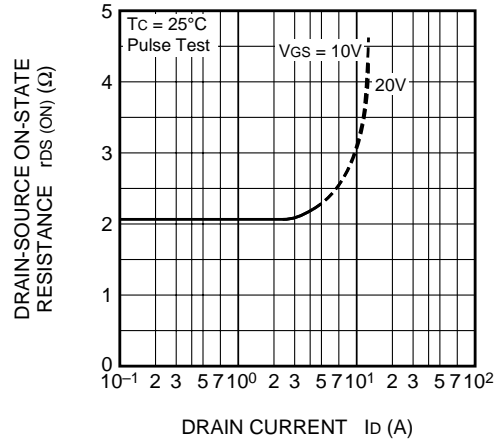
PERFORMANCE CURVES



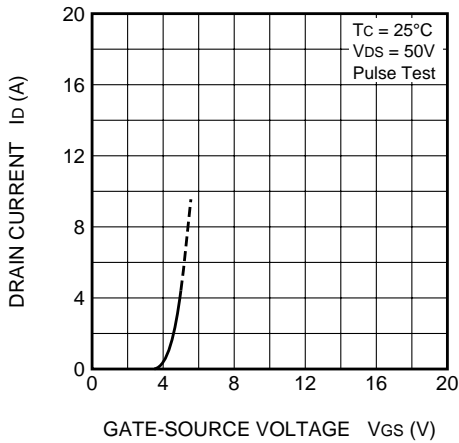
ON-STATE VOLTAGE VS. GATE-SOURCE VOLTAGE (TYPICAL)



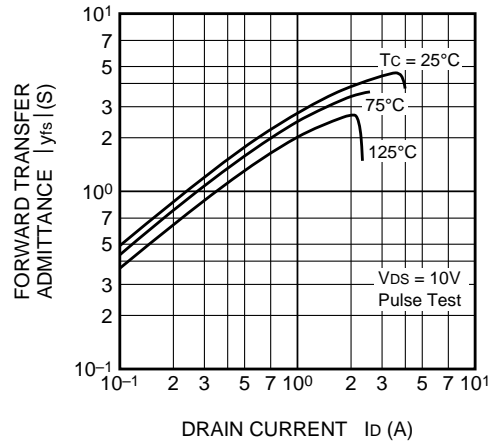
ON-STATE RESISTANCE VS. DRAIN CURRENT (TYPICAL)



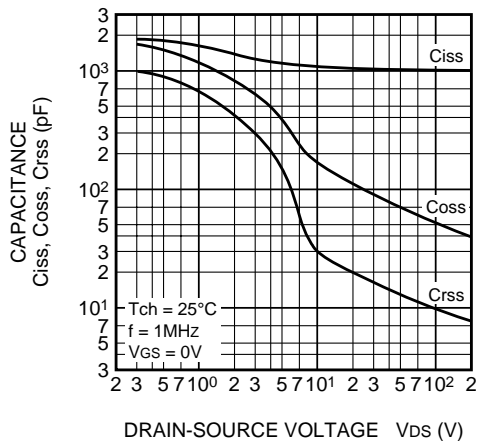
TRANSFER CHARACTERISTICS (TYPICAL)



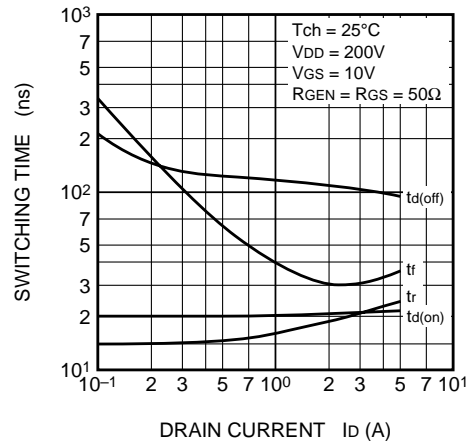
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT (TYPICAL)



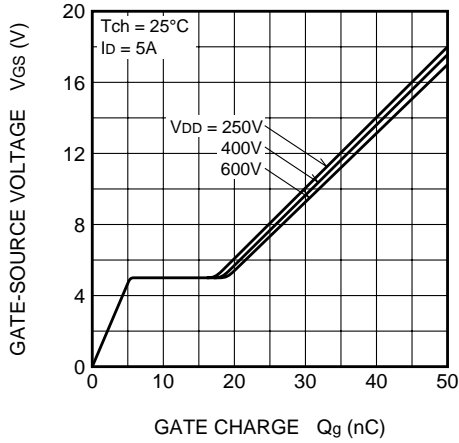
CAPACITANCE VS. DRAIN-SOURCE VOLTAGE (TYPICAL)



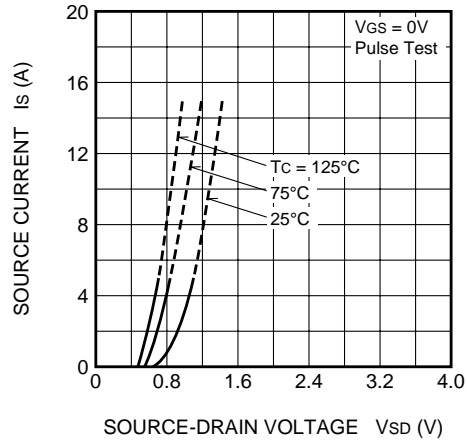
SWITCHING CHARACTERISTICS (TYPICAL)



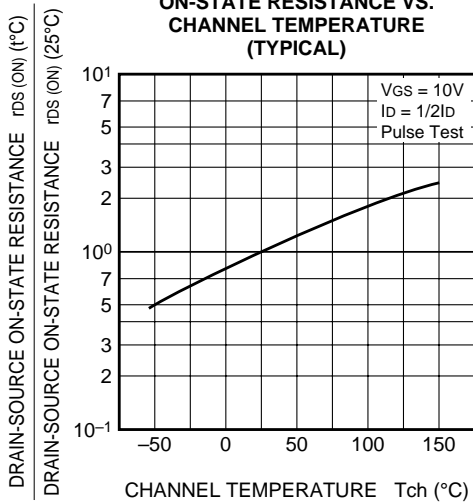
GATE-SOURCE VOLTAGE VS. GATE CHARGE (TYPICAL)



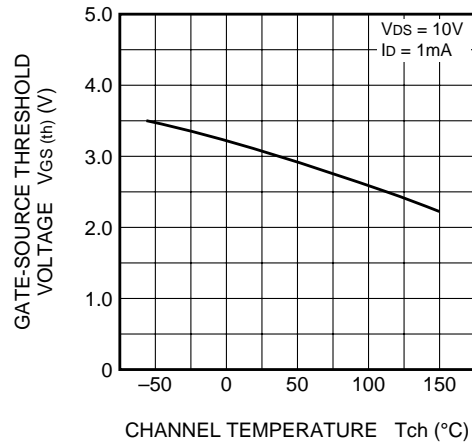
SOURCE-DRAIN DIODE FORWARD CHARACTERISTICS (TYPICAL)



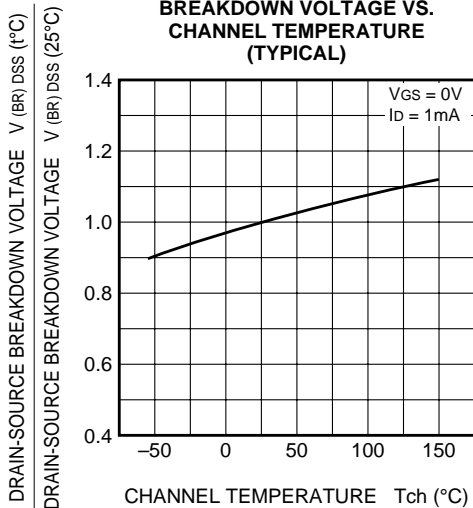
ON-STATE RESISTANCE VS. CHANNEL TEMPERATURE (TYPICAL)



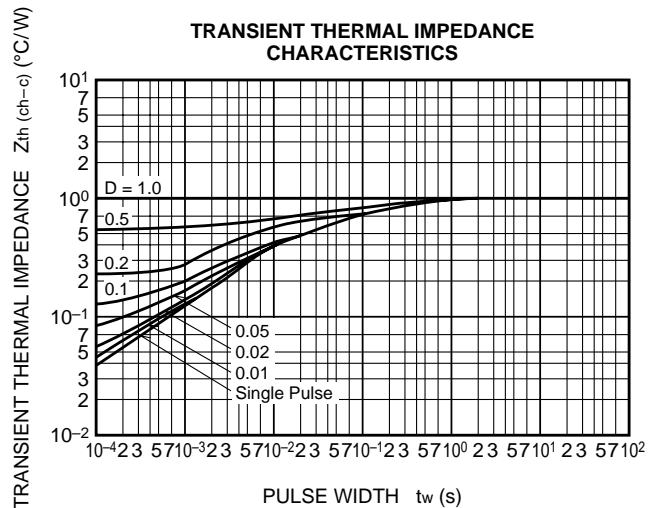
THRESHOLD VOLTAGE VS. CHANNEL TEMPERATURE (TYPICAL)



BREAKDOWN VOLTAGE VS. CHANNEL TEMPERATURE (TYPICAL)



TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS



This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.