

FS1AS-16A

HIGH-SPEED SWITCHING USE

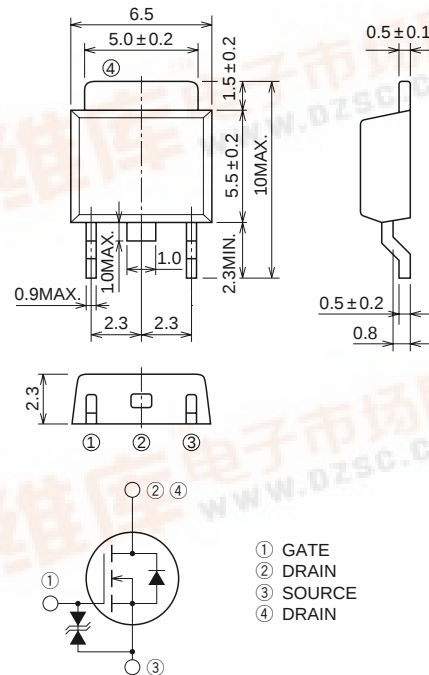
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- V_{DS} 800V
- $r_{DS(ON)}(MAX)$ 12.3Ω
- I_D 1A

OUTLINE DRAWING

Dimensions in mm



MP-3

APPLICATION

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

MAXIMUM RATINGS (Tc = 25°C)

Symbol	Parameter	Conditions	Ratings	Unit
V_{DS}	Drain-source voltage	$V_{GS} = 0V$	800	V
V_{GS}	Gate-source voltage	$V_{DS} = 0V$	±30	V
I_D	Drain current		1	A
I_{DM}	Drain current (Pulsed)		3	A
P_D	Maximum power dissipation		55	W
T_{ch}	Channel temperature		-55 ~ +150	°C
T_{stg}	Storage temperature		-55 ~ +150	°C
—	Weight	Typical value	0.26	g

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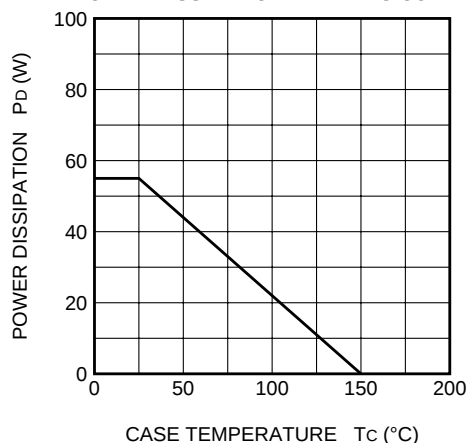
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ELECTRICAL CHARACTERISTICS (T_{ch} = 25°C)

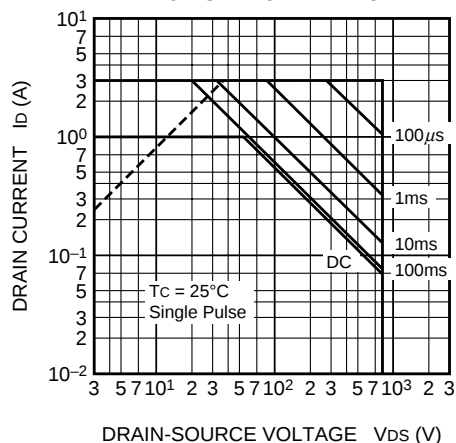
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
V _{(BR)DSS}	Drain-source breakdown voltage	I _D = 1mA, V _{GS} = 0V	800	—	—	V
V _{(BR)GSS}	Gate-source breakdown voltage	I _{GS} = ±100μA, V _{DS} = 0V	±30	—	—	V
I _{GSS}	Gate-source leakage current	V _{GS} = ±25V, V _{DS} = 0V	—	—	±10	μA
I _{DSS}	Drain-source leakage current	V _{DS} = 800V, 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 = 0.5A, V _{GS} = 10V	—	9.43	12.3	Ω
V _{DS(ON)}	Drain-source on-state voltage	I _D = 0.5A, V _{GS} = 10V	—	4.72	6.15	V
y _{fs}	Forward transfer admittance	I _D = 0.5A, V _{DS} = 10V	0.6	1.0	—	S
C _{iss}	Input capacitance	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz	—	270	—	pF
C _{oss}	Output capacitance		—	26	—	pF
C _{rss}	Reverse transfer capacitance		—	4	—	pF
t _{d(on)}	Turn-on delay time	V _{DD} = 200V, I _D = 0.5A, V _{GS} = 10V, R _{GEN} = R _{GS} = 50Ω	—	9	—	ns
t _r	Rise time		—	12	—	ns
t _{d(off)}	Turn-off delay time		—	35	—	ns
t _f	Fall time		—	30	—	ns
V _{SD}	Source-drain voltage	I _S = 0.5A, V _{GS} = 0V	—	1.0	1.5	V
R _{th(ch-c)}	Thermal resistance	Channel to case	—	—	2.27	°C/W

PERFORMANCE CURVES

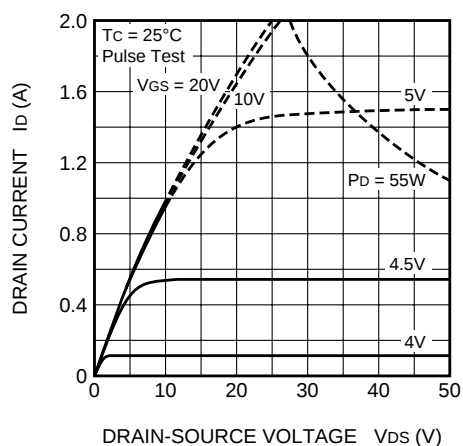
POWER DISSIPATION DERATING CURVE



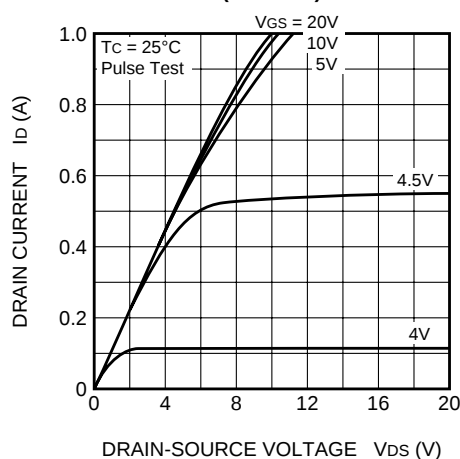
MAXIMUM SAFE OPERATING AREA



OUTPUT CHARACTERISTICS (TYPICAL)

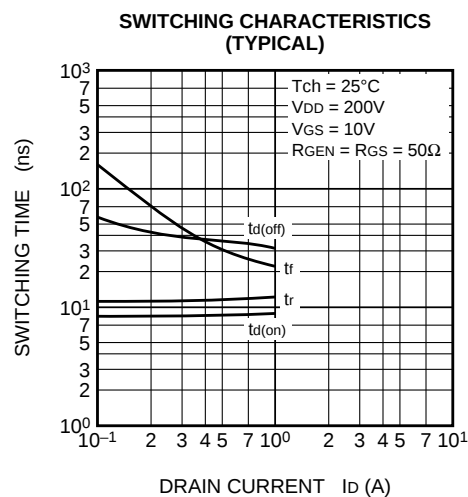
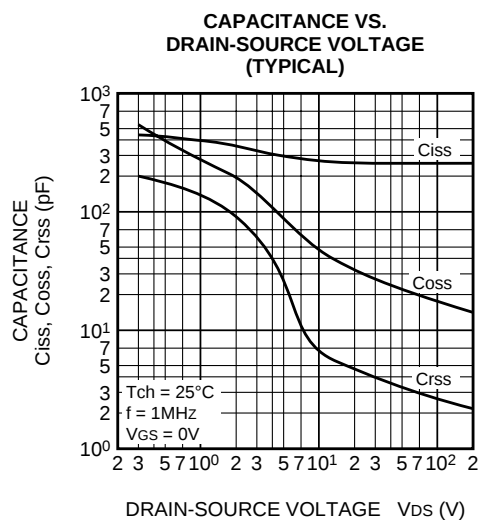
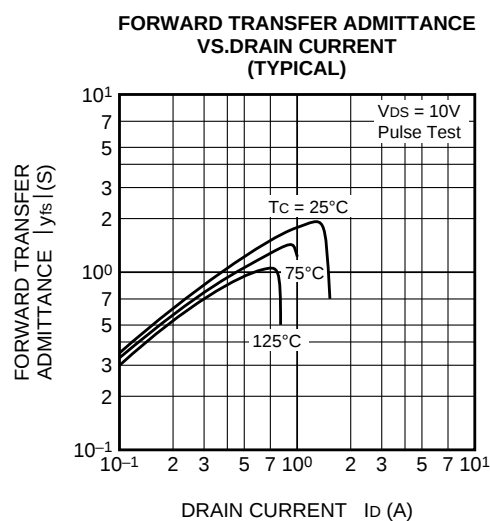
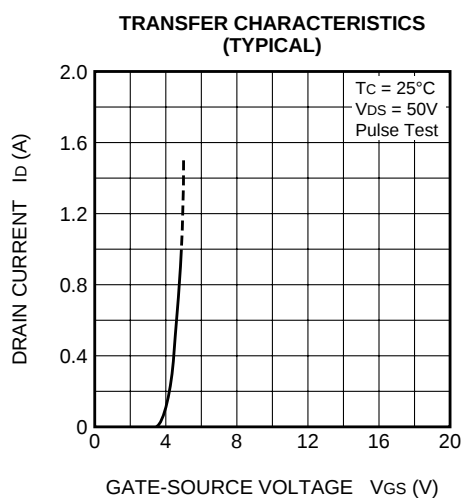
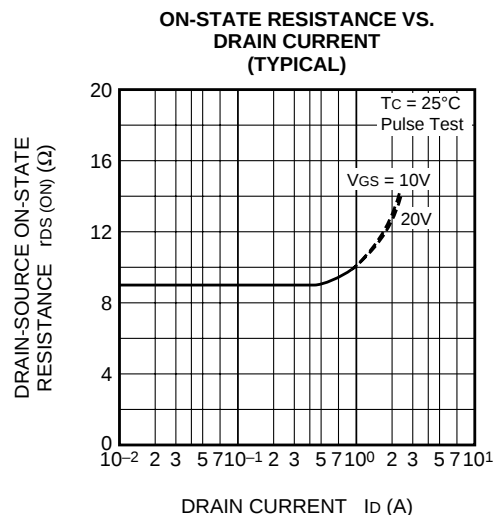
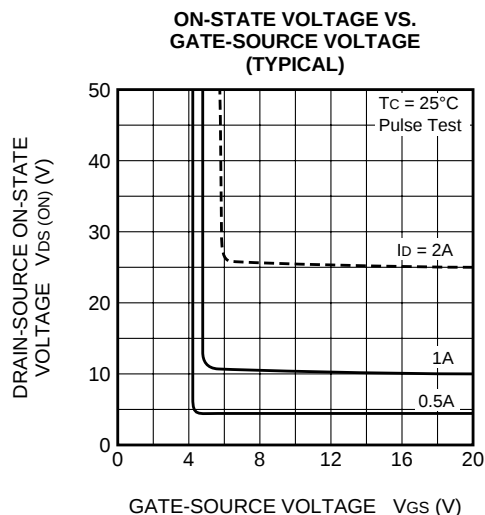


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