

FS10SM-16A

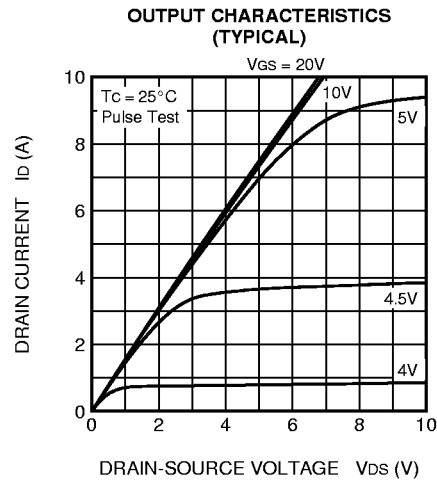
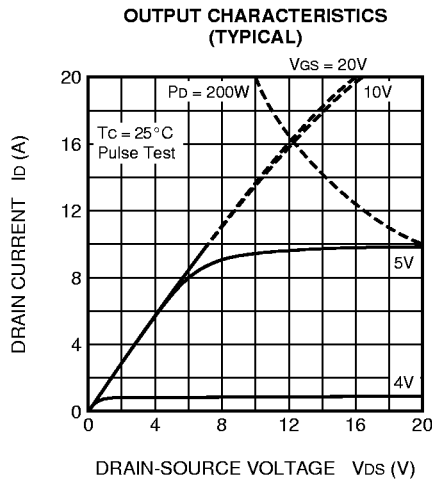
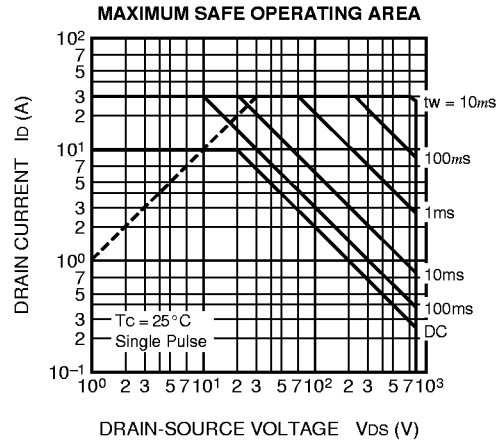
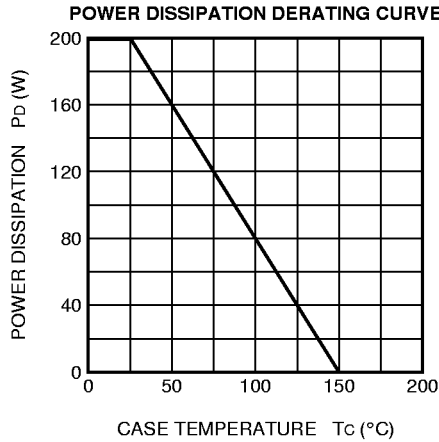
FS10SM-16A

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	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 = 5A, V _{GS} = 10V	—	0.76	0.98	Ω
V _{DS} (ON)	Drain-source on-state voltage	I _D = 5A, V _{GS} = 10V	—	3.80	4.90	V
y _{fs}	Forward transfer admittance	I _D = 5A, V _{DS} = 10V	6.0	10.0	—	S
C _{iss}	Input capacitance	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz	—	2250	—	pF
C _{oss}	Output capacitance		—	230	—	pF
C _{rss}	Reverse transfer capacitance		—	42	—	pF
t _d (on)	Turn-on delay time	V _{DD} = 200V, I _D = 5A, V _{GS} = 10V, R _{GEN} = R _{GS} = 50Ω	—	38	—	ns
t _r	Rise time		—	46	—	ns
t _d (off)	Turn-off delay time		—	260	—	ns
t _f	Fall time		—	75	—	ns
V _{SD}	Source-drain voltage	I _S = 5A, V _{GS} = 0V	—	1.0	1.5	V
R _{th} (ch-c)	Thermal resistance	Channel to case	—	—	0.625	°C/W

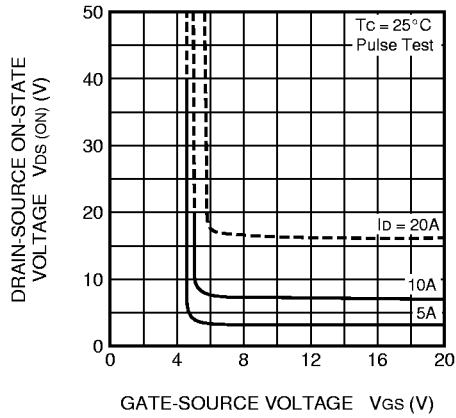
PERFORMANCE CURVES



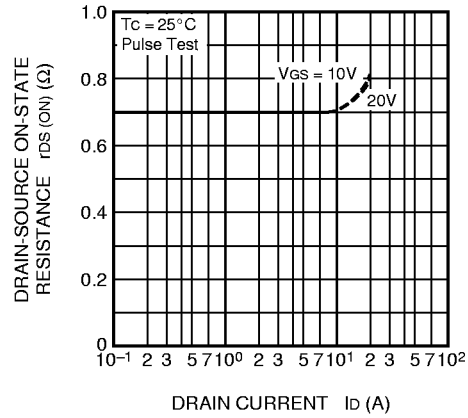
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HIGH-SPEED SWITCHING USE

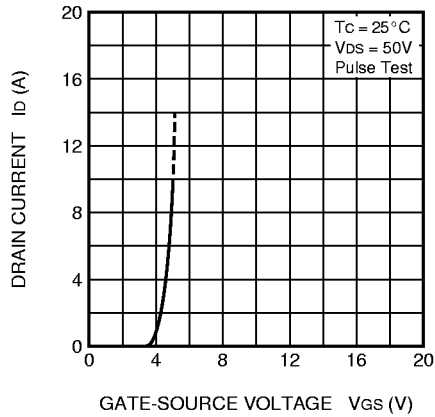
ON-STATE VOLTAGE VS.
GATE-SOURCE VOLTAGE
(TYPICAL)



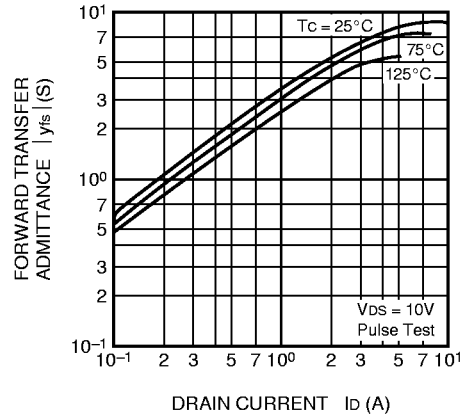
ON-STATE RESISTANCE VS.
DRAIN CURRENT
(TYPICAL)



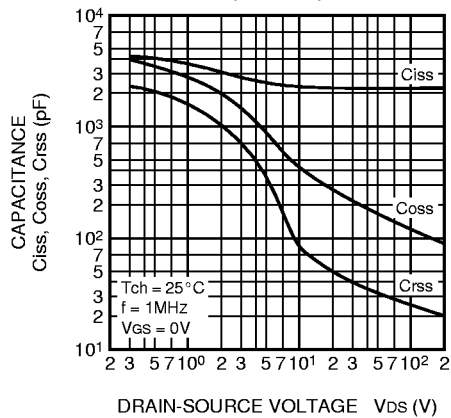
TRANSFER CHARACTERISTICS
(TYPICAL)



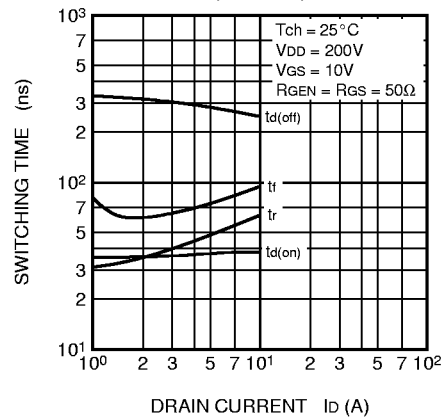
FORWARD TRANSFER ADMITTANCE
VS. DRAIN CURRENT
(TYPICAL)



CAPACITANCE VS.
DRAIN-SOURCE VOLTAGE
(TYPICAL)



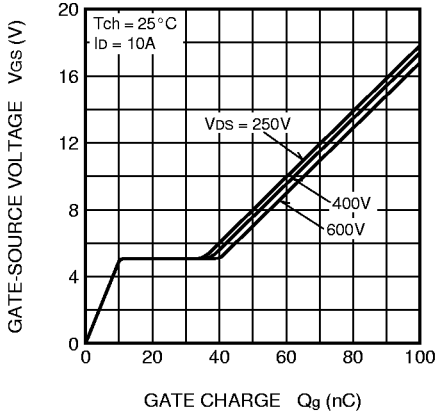
SWITCHING CHARACTERISTICS
(TYPICAL)



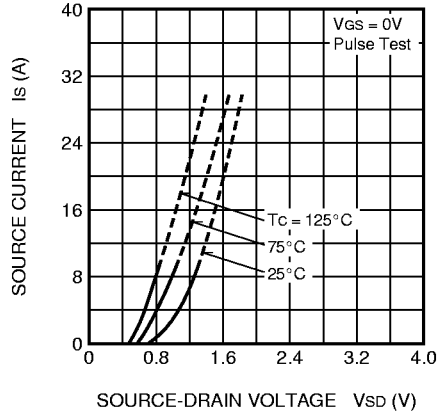
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HIGH-SPEED SWITCHING USE

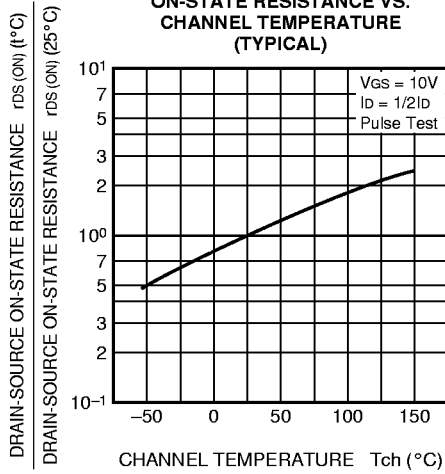
**GATE-SOURCE VOLTAGE
VS. GATE CHARGE
(TYPICAL)**



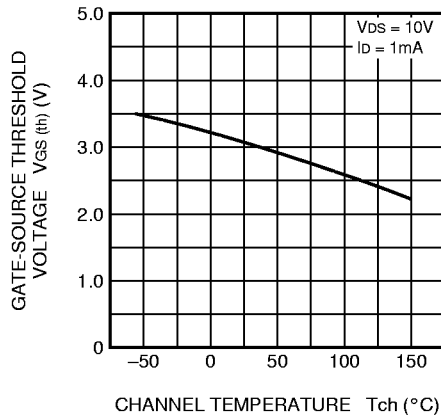
**SOURCE-DRAIN DIODE
FORWARD CHARACTERISTICS
(TYPICAL)**



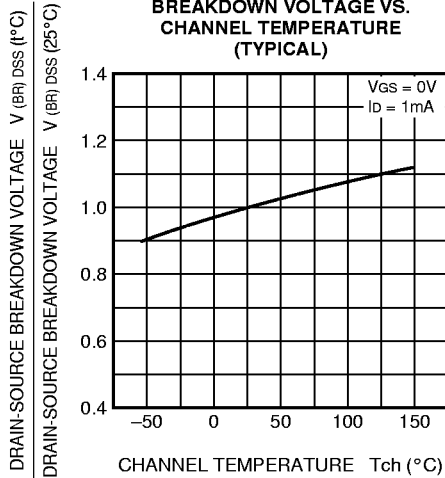
**ON-STATE RESISTANCE VS.
CHANNEL TEMPERATURE
(TYPICAL)**



**THRESHOLD VOLTAGE VS.
CHANNEL TEMPERATURE
(TYPICAL)**



**BREAKDOWN VOLTAGE VS.
CHANNEL TEMPERATURE
(TYPICAL)**



**TRANSIENT THERMAL IMPEDANCE
CHARACTERISTICS**

