

این دیتاشیت توسط توکل الکترونیک تهیه و ارائه شده است.
جهت مشاهده قیمت، موجودی و ثبت سفارش این قطعه به وبسایت توکل الکترونیک مراجعه فرمایید.

**مشاهده قیمت و خرید**

برای خرید و مشاهده سایر محصولات کلیک کنید



MITSUBISHI Nch POWER MOSFET

FS10SM-18A

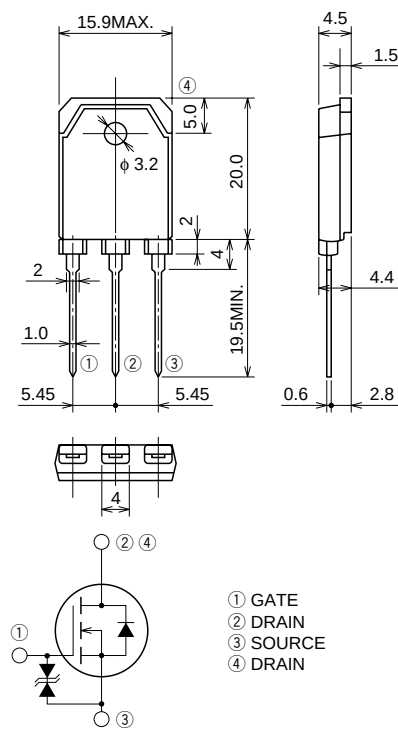
HIGH-SPEED SWITCHING USE

FS10SM-18A

- V_{DS} 900V
- $r_{DS(ON)}$ (MAX) 1.2Ω
- I_D 10A

OUTLINE DRAWING

Dimensions in mm

**TO-3P****APPLICATION**

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

MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

Symbol	Parameter	Conditions	Ratings	Unit
V_{DS}	Drain-source voltage	$V_{GS} = 0V$	900	V
V_{GS}	Gate-source voltage	$V_{DS} = 0V$	± 30	V
I_D	Drain current		10	A
I_{DM}	Drain current (Pulsed)		30	A
P_D	Maximum power dissipation		200	W
T_{ch}	Channel temperature		$-55 \sim +150$	$^\circ\text{C}$
T_{stg}	Storage temperature		$-55 \sim +150$	$^\circ\text{C}$
—	Weight	Typical value	4.8	g

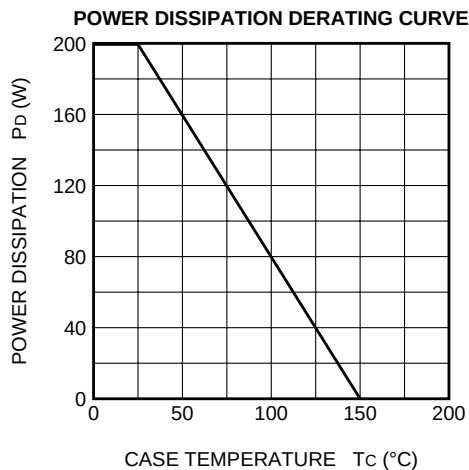
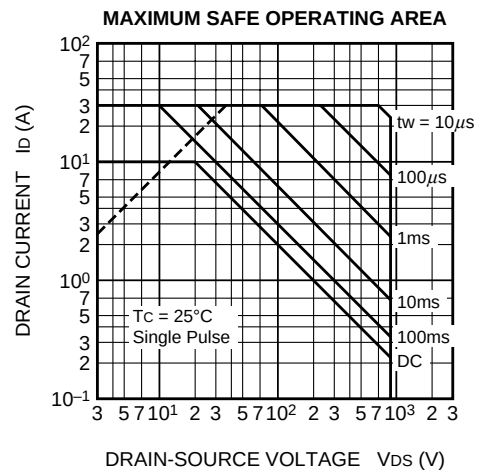
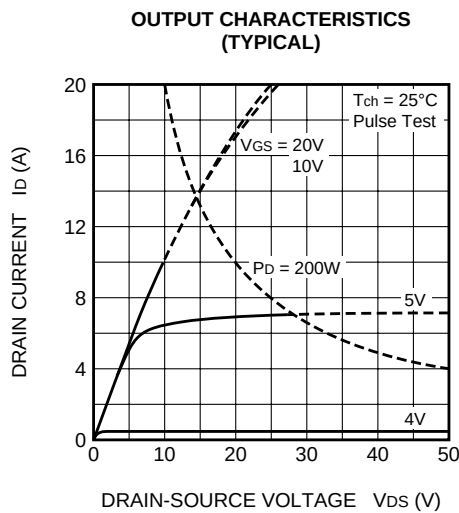
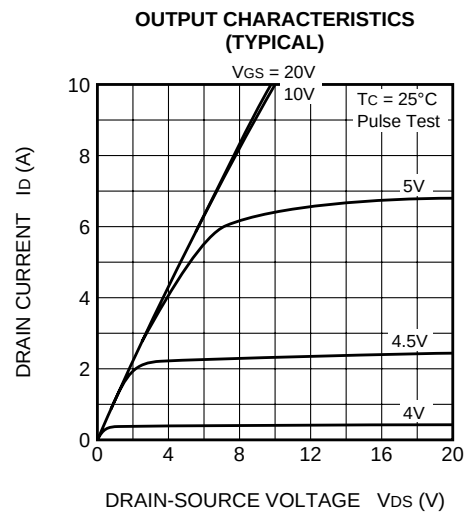
FS10SM-18A

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 = 5A, V _{GS} = 10V	—	0.93	1.20	Ω
V _{DS} (ON)	Drain-source on-state voltage	I _D = 5A, V _{GS} = 10V	—	4.65	6.00	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

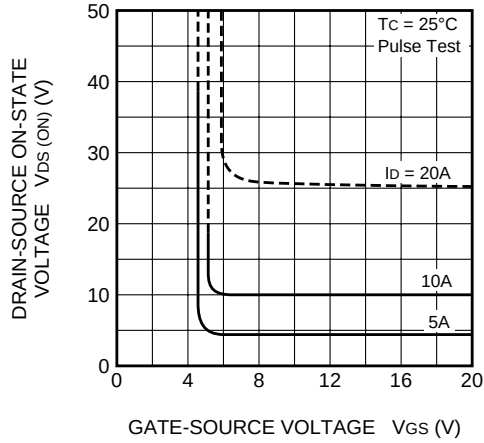
PERFORMANCE CURVES



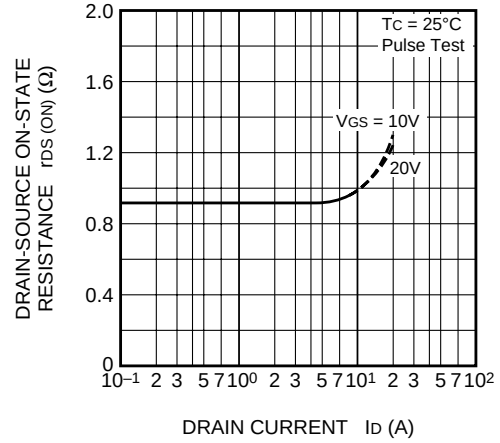
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HIGH-SPEED SWITCHING USE

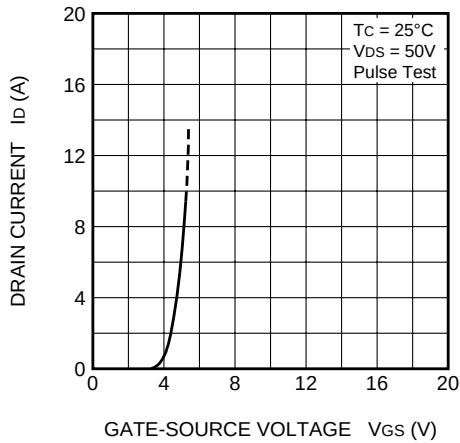
ON-STATE VOLTAGE VS.
GATE-SOURCE VOLTAGE
(TYPICAL)



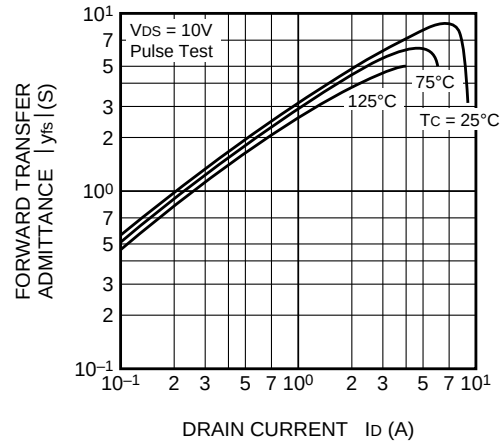
ON-STATE RESISTANCE VS.
DRAIN CURRENT
(TYPICAL)



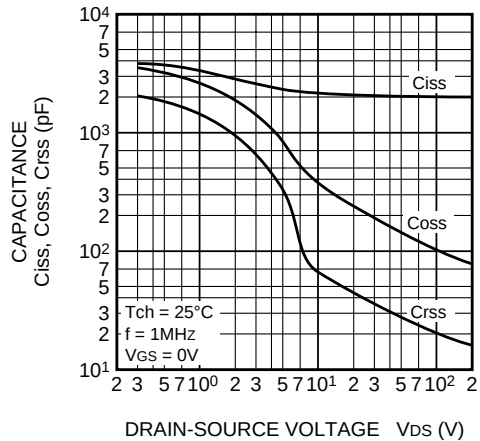
TRANSFER CHARACTERISTICS
(TYPICAL)



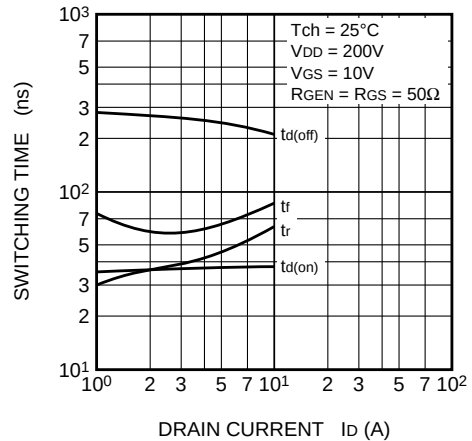
FORWARD TRANSFER ADMITTANCE
VS.DRAIN CURRENT
(TYPICAL)



CAPACITANCE VS.
DRAIN-SOURCE VOLTAGE
(TYPICAL)



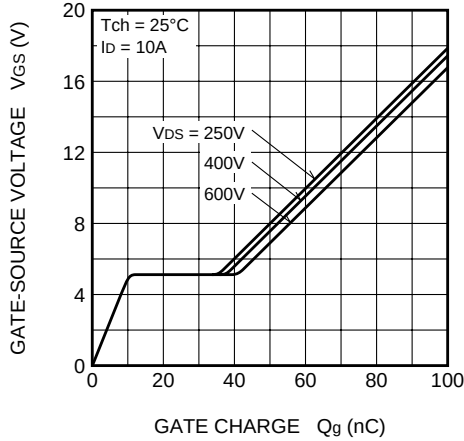
SWITCHING CHARACTERISTICS
(TYPICAL)



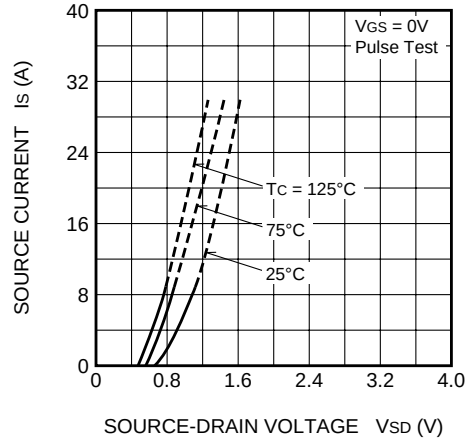
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HIGH-SPEED SWITCHING USE

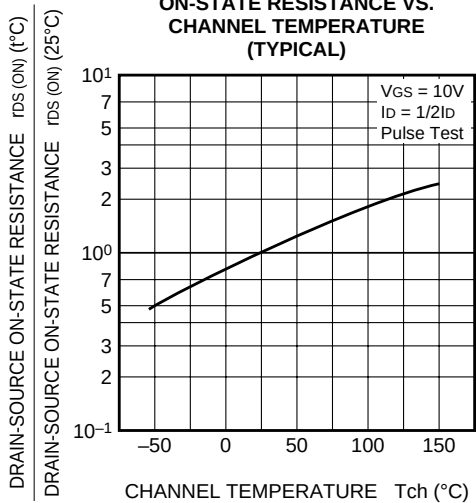
**GATE-SOURCE VOLTAGE
VS. GATE CHARGE
(TYPICAL)**



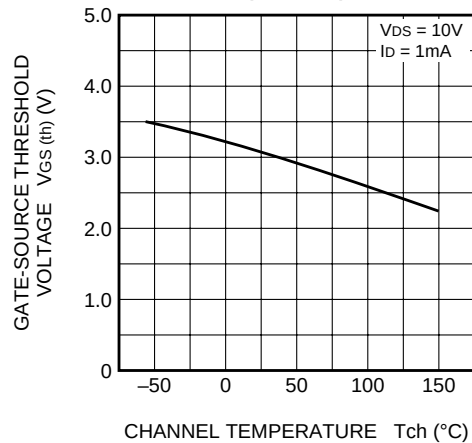
**SOURCE-DRAIN DIODE
FORWARD CHARACTERISTICS
(TYPICAL)**



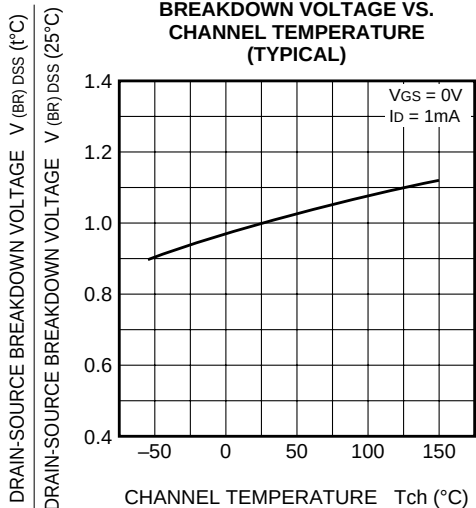
**ON-STATE RESISTANCE VS.
CHANNEL TEMPERATURE
(TYPICAL)**



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



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



**TRANSIENT THERMAL IMPEDANCE
CHARACTERISTICS**

