

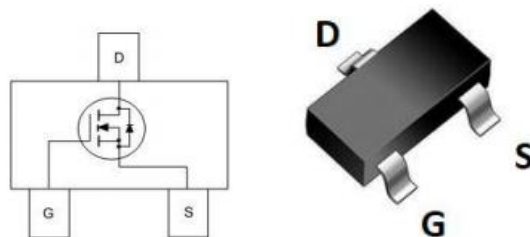


安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

FS5N10A

SOT-23 100V N Channel Enhancement 沟道增强型
MOS Field Effect Transistor 场效应管



■ Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Drain-Source Voltage 漏极-源极电压	BV_{DSS}	100	V
Gate- Source Voltage 栅极-源极电压	V_{GS}	± 20	V
Drain Current (continuous)漏极电流-连续	I_D (at $T_A = 25^\circ C$)	5	A
Drain Current (pulsed)漏极电流-脉冲	I_{DM}	12	A
Total Device Dissipation 总耗散功率	P_D (at $T_A = 25^\circ C$)	1400	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	89	$^\circ C/W$
Junction/Storage Temperature 结温/储存温度	T_J, T_{stg}	-55~150	$^\circ C$

■ Device Marking 产品字标

FS5N10A=MA6



■ Electrical Characteristics 电特性

($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

Characteristic 特性参数	Symbol 符号	Min 最小值	Typ 典型值	Max 最大值	Unit 单位
Drain-Source Breakdown Voltage 漏极-源极击穿电压($I_D=250\mu\text{A}, V_{GS}=0\text{V}$)	BV_{DSS}	100	—	—	V
Gate Threshold Voltage 栅极开启电压($I_D=250\mu\text{A}, V_{GS}=V_{DS}$)	$V_{GS(th)}$	1	1.6	2.5	V
Zero Gate Voltage Drain Current 零栅压漏极电流($V_{GS}=0\text{V}, V_{DS}=100\text{V}$)	I_{DSS}	—	—	1	μA
Gate Body Leakage 栅极漏电流($V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$)	I_{GSS}	—	—	± 100	nA
Static Drain-Source On-State Resistance 静态漏源导通电阻($I_D=3\text{A}, V_{GS}=10\text{V}$) ($I_D=1\text{A}, V_{GS}=4.5\text{V}$)	$R_{DS(on)}$	—	86 113	100 130	$\text{m}\Omega$
Diode Forward Voltage Drop 内附二极管正向压降($I_{SD}=1\text{A}, V_{GS}=0\text{V}$)	V_{SD}	—	0.8	1.3	V
Input Capacitance 输入电容 ($V_{GS}=0\text{V}, V_{DS}=50\text{V}, f=1\text{MHz}$)	C_{ISS}	—	210	—	pF
Common Source Output Capacitance 共源输出电容($V_{GS}=0\text{V}, V_{DS}=50\text{V}, f=1\text{MHz}$)	C_{OSS}	—	30	—	pF
Reverse Transfer Capacitance 反馈电容($V_{GS}=0\text{V}, V_{DS}=50\text{V}, f=1\text{MHz}$)	C_{RSS}	—	2	—	pF
Total Gate Charge 栅极电荷密度 ($V_{DS}=50\text{V}, I_D=3\text{A}, V_{GS}=10\text{V}$)	Q_g	—	4	—	nC
Gate Source Charge 栅源电荷密度 ($V_{DS}=50\text{V}, I_D=3\text{A}, V_{GS}=10\text{V}$)	Q_{gs}	—	2	—	nC
Gate Drain Charge 栅漏电荷密度 ($V_{DS}=50\text{V}, I_D=3\text{A}, V_{GS}=10\text{V}$)	Q_{gd}	—	1	—	nC
Turn-ON Delay Time 开启延迟时间 ($V_{DS}=50\text{V}, I_D=1.5\text{A}, R_{GEN}=1\Omega, V_{GS}=10\text{V}$)	$t_{d(on)}$	—	15	—	ns
Turn-ON Rise Time 开启上升时间 ($V_{DS}=50\text{V}, I_D=1.5\text{A}, R_{GEN}=1\Omega, V_{GS}=10\text{V}$)	t_r	—	5	—	ns
Turn-OFF Delay Time 关断延迟时间 ($V_{DS}=50\text{V}, I_D=1.5\text{A}, R_{GEN}=1\Omega, V_{GS}=10\text{V}$)	$t_{d(off)}$	—	22	—	ns
Turn-OFF Fall Time 关断下降时间 ($V_{DS}=50\text{V}, I_D=1.5\text{A}, R_{GEN}=1\Omega, V_{GS}=10\text{V}$)	t_f	—	3	—	ns

Typical Characteristic Curve 典型特性曲线

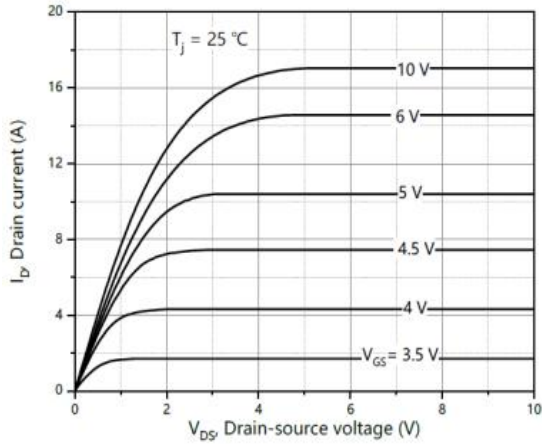


Figure 1: Output Characteristics

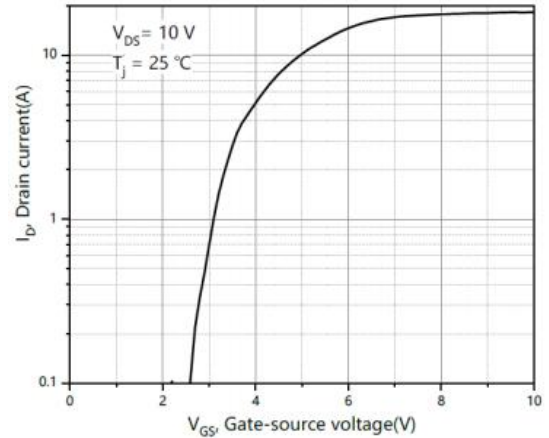


Figure 2: Transfer Characteristics

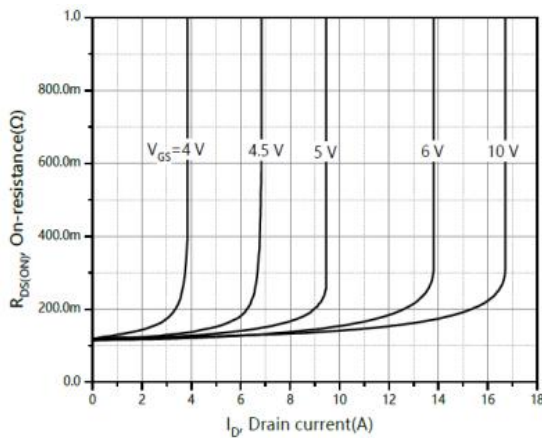


Figure 3: On-Resistance vs. Drain Current

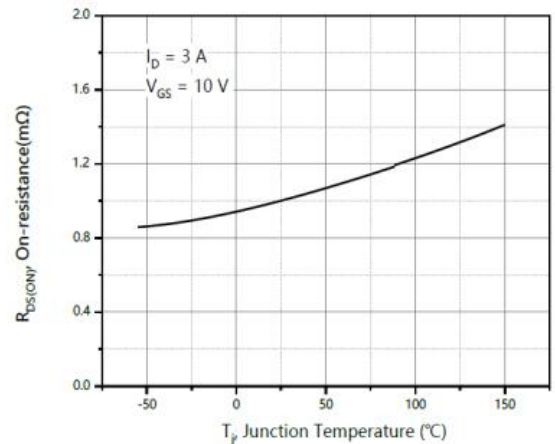


Figure 4: On-Resistance vs. Temperature

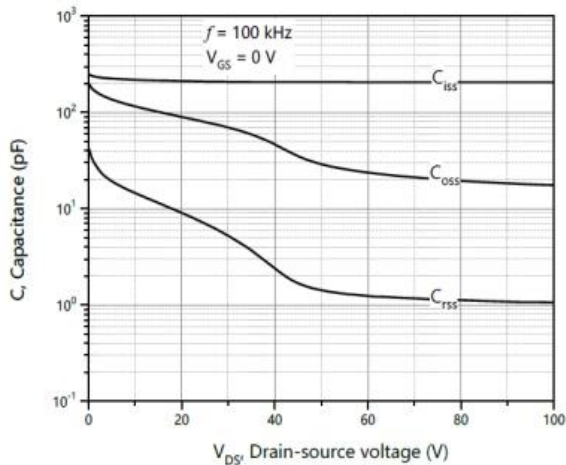


Figure 5: Capacitance Characteristics

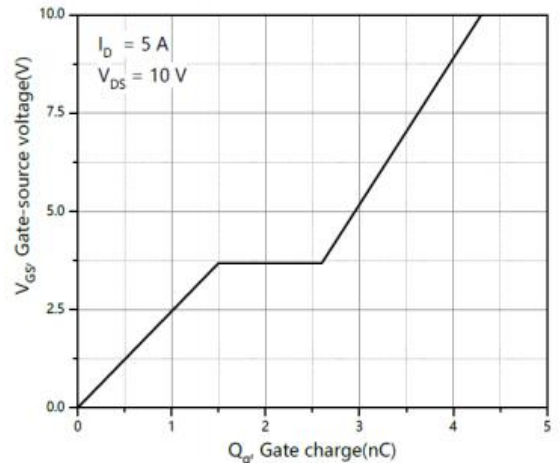


Figure 6: Gate-Charge Characteristics

■ Typical Characteristic Curve 典型特性曲线

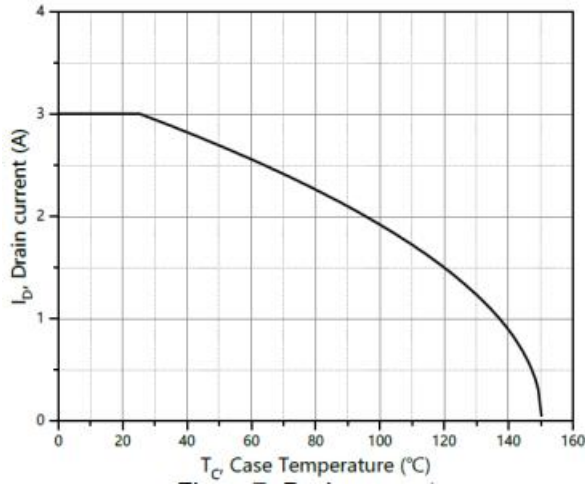


Figure 7: Drain Current vs. Temperature

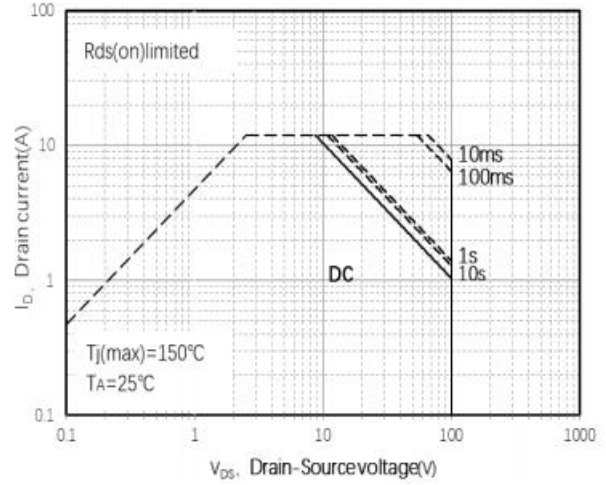


Figure 8: Safe Operating Area

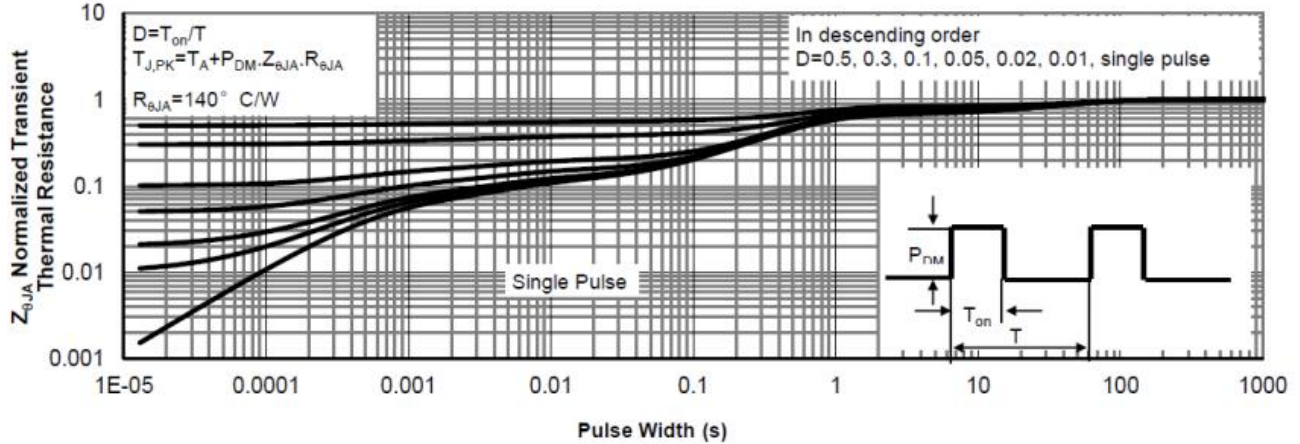
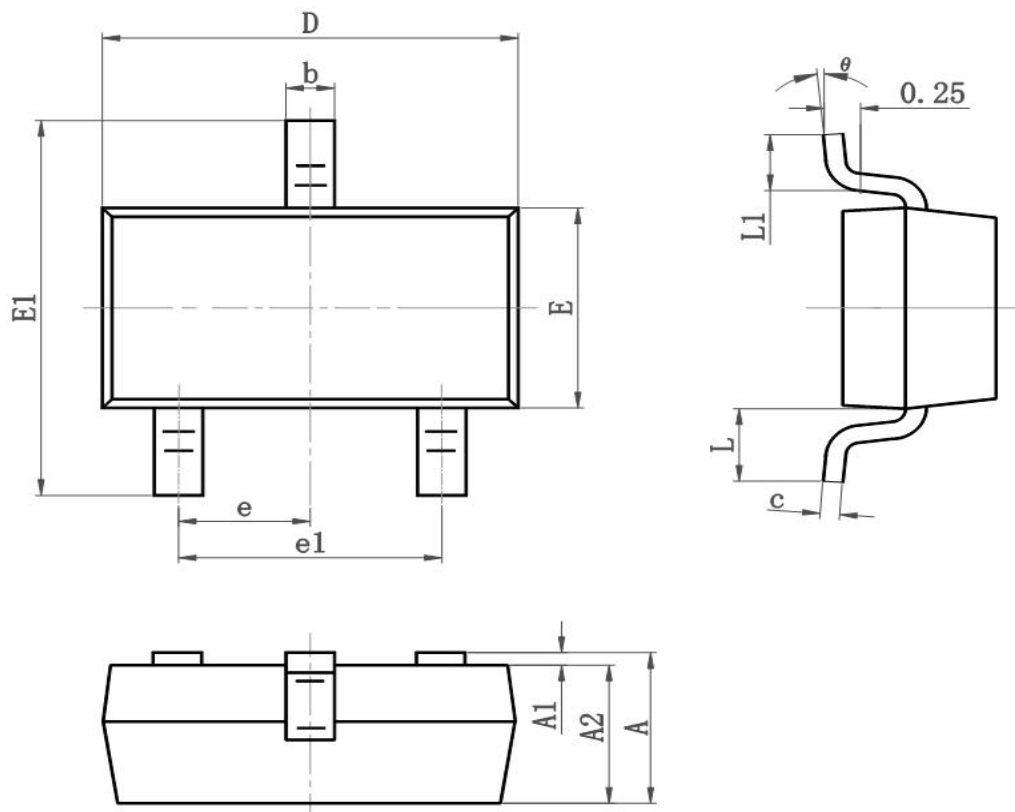


Figure 9: Transient Thermal Response Curve

Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [MOSFET](#) category:

Click to view products by [FOSAN](#) manufacturer:

Other Similar products are found below :

[IRFD120](#) [JANTX2N5237](#) [2SK2267\(Q\)](#) [BUK455-60A/B](#) [TK100A10N1,S4X\(S](#) [MIC4420CM-TR](#) [VN1206L](#) [NDP4060](#) [SI4482DY](#)
[IRS2092STRPBF-EL](#) [IPS70R2K0CEAKMA1](#) [TK31J60W5,S1VQ\(O](#) [TK31J60W,S1VQ\(O](#) [TK16J60W,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#)
[DMN1017UCP3-7](#) [EFC2J004NUZTDG](#) [P85W28HP2F-7071](#) [NTE2384](#) [DMC2700UDMQ-7](#) [DMN2080UCB4-7](#) [DMN61D9UWQ-13](#)
[US6M2GTR](#) [DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [IPS60R3K4CEAKMA1](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#) [STF5N65M6](#)
[IRF40H233XTMA1](#) [STU5N65M6](#) [DMN6022SSD-13](#) [DMN13M9UCA6-7](#) [DMTH10H4M6SPS-13](#) [IPS60R360PFD7SAKMA1](#)
[DMN2990UFB-7B](#) [SSM3K35CT,L3F](#) [IPLK60R1K0PFD7ATMA1](#) [2N7002W-G](#) [MCAC30N06Y-TP](#) [IPWS65R035CFD7AXKSA1](#)
[MCQ7328-TP](#) [SSM3J143TU,LXHF](#) [DMN12M3UCA6-7](#) [PJMF280N65E1_T0_00201](#) [PJMF380N65E1_T0_00201](#)
[PJMF280N60E1_T0_00201](#) [PJMF600N65E1_T0_00201](#) [PJMF900N65E1_T0_00201](#) [PJMF900N60E1_T0_00201](#)