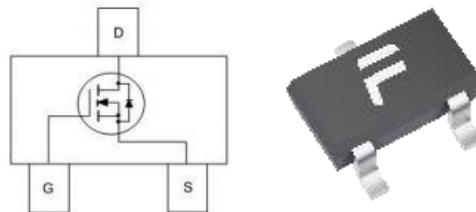


**SOT-323 20V N Channel Enhancement 沟道增强型
MOS Field Effect Transistor 场效应管**



■ **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}	20	V
Gate- Source Voltage 栅极-源极电压	V_{GS}	± 8	V
Drain Current (continuous)漏极电流-连续	I_D (at $T_A = 25^\circ\text{C}$)	2.1	A
Drain Current (pulsed)漏极电流-脉冲	I_{DM}	8	A
Total Device Dissipation 总耗散功率	P_D (at $T_A = 25^\circ\text{C}$)	350	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction/Storage Temperature 结温/储存温度	T_J, T_{stg}	-55~150	$^\circ\text{C}$

■ **Device Marking 产品字标**

FS2302W=S2

■ Electrical Characteristics 电特性

 (T_A=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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 =250uA, V _{GS} =0V)	BV _{DSS}	20	—	—	V
Gate Threshold Voltage 栅极开启电压(I _D =250uA, V _{GS} =V _{DS})	V _{GS(th)}	0.6	0.9	1.2	V
Zero Gate Voltage Drain Current 零栅压漏极电流(V _{GS} =0V, V _{DS} =20V)	I _{DSS}	—	—	1	uA
Gate Body Leakage 栅极漏电流(V _{GS} =±8V, V _{DS} =0V)	I _{GSS}	—	—	±100	nA
Static Drain-Source On-State Resistance 静态漏源导通电阻(I _D =3.6A, V _{GS} =4.5V) (I _D =3.1A, V _{GS} =2.5V)	R _{DS(ON)}	—	45 70	60 115	mΩ
Diode Forward Voltage Drop 内附二极管正向压降(I _{SD} =0.94A, V _{GS} =0V)	V _{SD}	—	0.76	1.2	V
Input Capacitance 输入电容 (V _{GS} =0V, V _{DS} =10V, f=1MHz)	C _{ISS}	—	300	—	pF
Common Source Output Capacitance 共源输出电容(V _{GS} =0V, V _{DS} =10V, f=1MHz)	C _{OSS}	—	120	—	pF
Reverse Transfer Capacitance 反馈电容(V _{GS} =0V, V _{DS} =10V, f=1MHz)	C _{RSS}	—	80	—	pF
Total Gate Charge 栅极电荷密度 (V _{DS} =10V, I _D =3.6A, V _{GS} =4.5V)	Q _g	—	4	—	nC
Gate Source Charge 栅源电荷密度 (V _{DS} =10V, I _D =3.6A, V _{GS} =4.5V)	Q _{gs}	—	0.65	—	nC
Gate Drain Charge 栅漏电荷密度 (V _{DS} =10V, I _D =3.6A, V _{GS} =4.5V)	Q _{gd}	—	1.5	—	nC
Turn-ON Delay Time 开启延迟时间 (V _{DS} =10V I _D =3.6A, R _{GEN} =6Ω, V _{GS} =4.5V)	t _{d(on)}	—	7	—	ns
Turn-ON Rise Time 开启上升时间 (V _{DS} =10V I _D =3.6A, R _{GEN} =6Ω, V _{GS} =4.5V)	t _r	—	55	—	ns
Turn-OFF Delay Time 关断延迟时间 (V _{DS} =10V I _D =3.6A, R _{GEN} =6Ω, V _{GS} =4.5V)	t _{d(off)}	—	16	—	ns
Turn-OFF Fall Time 关断下降时间 (V _{DS} =10V I _D =3.6A, R _{GEN} =6Ω, V _{GS} =4.5V)	t _f	—	10	—	ns

■ Typical Characteristic Curve 典型特性曲线

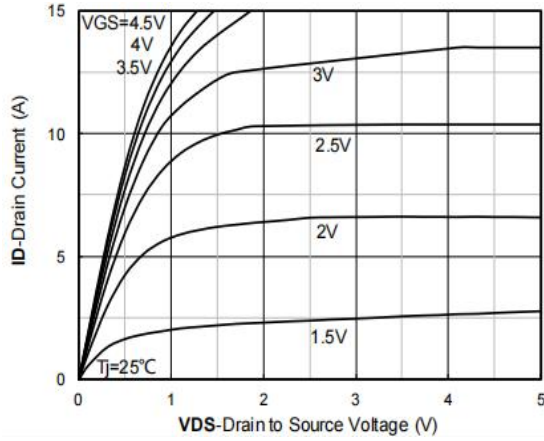


Figure 1: Output Characteristics

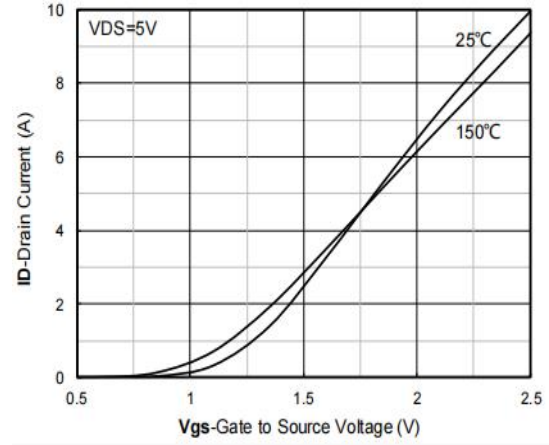


Figure 2: Transfer Characteristics

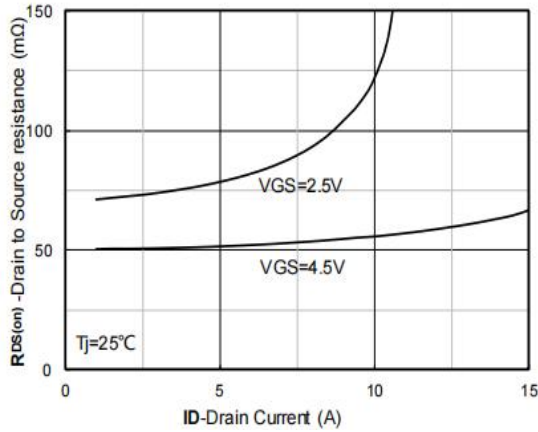


Figure 3: On-Resistance vs. Drain Current

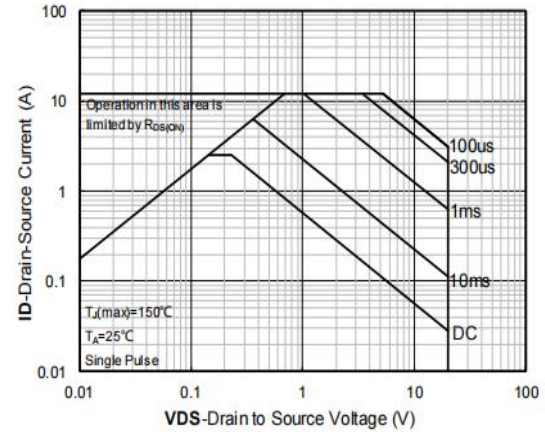
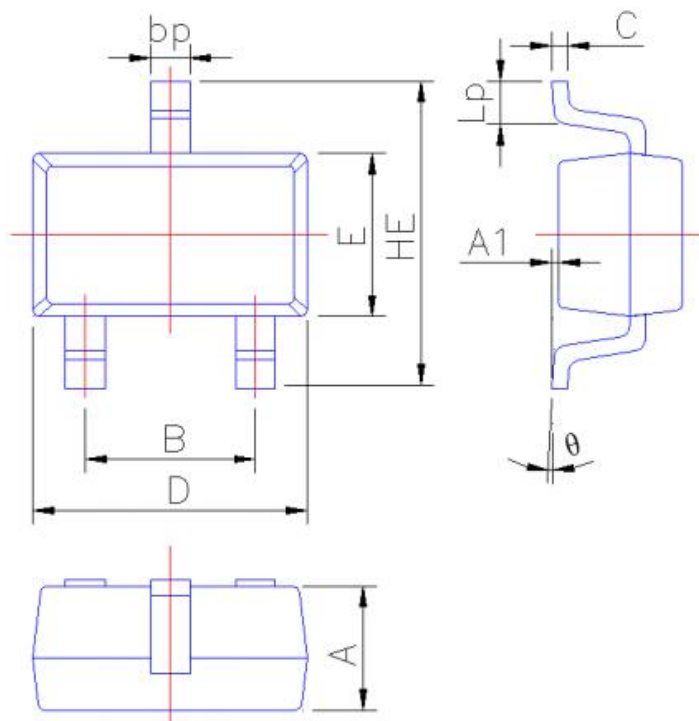


Figure 4: Safe Operating Area

■ **Dimension 外形封装尺寸**



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.00
A1	0.010	0.100
B	1.20	1.40
bp	0.25	0.45
C	0.09	0.15
D	2.00	2.20
E	1.15	1.35
HE	2.15	2.55
Lp	0.25	0.46
θ	0°	6°