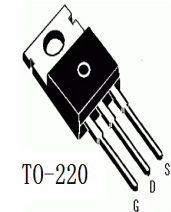
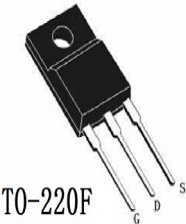
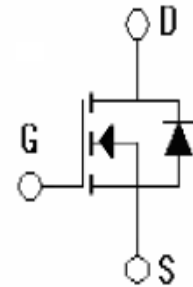


- 特点：■低栅极电荷■低Crss■开关速度快■符合ROHS规范
- FEATURES:■LOW GATE CHARGE ■LOW Crss ■FAST SWITCHING ■ROHS COMPLIANT
- 应用■高频开关电源■电子镇流器等开关电路
- APPLICATION:■High efficiency switch mode power supplies ■Electronic ballast ECT.

- 绝对最大额定值（TC=25℃）
- Absolute Maximum Ratings (Tc=25℃)

参数名称 PARAMETER	符号 SYMBOL	额定值 VALUE	单位 UNIT
漏极-源极电压 Drain-Source Voltage	VDSS	650	V
连续漏极电流 Drain Current-continuous	ID	4.0	A
最大脉冲漏极电流 Drain Current-pulse	IDM	16.0	A
最高栅源电压 Gate-Source Voltage	VGSS	±30	V
耗散功率 Power Dissipation	PD	33	W
最高结温 Junction Temperature	Tj	150	℃
贮存温度 Storage Temperature	TsTg	-55~+150	℃

封装 Package



电特性（TC=25℃）
Electronic Characteristics(Tc=25℃)

参数名称 CHARACTERISTICS	符号 SYMBOL	测试条件 TEST CONDITION	最小值 MIN	典型值 Typ	最大值 MAX	单位 UNIT
漏极-源极击穿电压 Drain-Source Voltage	BVDSS	ID=250uA;VGS=0V	650	-	-	V
零栅压下漏极漏电流 Zero Gate Voltage Drain Current	IDSS	VDS=650V,VGS=0V (TC=25℃)	-	-	10	uA
正向栅极体漏电流 Gate-body leakage current.forward	IGSSF	VDS=0V,VGS=30V	-	-	100	nA
反向栅极体漏电流 Gate-body leakage current.reverse	IGSSR	VDS=0V,VGS=-30V	-	-	-100	nA
阈值电压 Gate Threshold Voltage	VGS(th)	VDS=VGS,ID=250uA	2.0	-	4.0	V
静态导通电阻 Static Drain-Source On-Resistance	VDS(ON)	VGS=10V,ID=2.0A	-	1.8	2.5	Ω
正向跨导 Forward Transconductance	Gfs	VDS=40V,ID=2.0A	-	4.7	-	S
输入电容 Input capacitance	Ciss	VDS=25V VGS=0V f=1.0MHZ	-	490	642	pF
输出电容 Ouput capacitance	Coss		-	95	124	pF
反向传输电容 Reverse transfer capacitance	Crss		-	9	12	pF

电特性 Electronic Characteristics

单脉冲雪崩能量（注2） Single Pulsed Avalanche Energy	EAS	240.0	MJ
雪崩电流（注1） Avalanche Current（注 1）	IAR	4.0	A
重复雪崩能量（注1） Repetitive Avalanche Current（note1）	EAR	10.0	MJ
二极管反向恢复最大电压变化速率（注3） Peak Diode Recovery dv/dt(note 3)	dv/dt	5.5	v/ns

开关特征 Swiching Characteristics

延迟时间 Turn-On delay time	td(on)	VDD=300V, ID=4A, RG=25 Ω (注 4,5)	-	16	42	ns
上升时间 Turn-On rise time	tf		-	49	111	ns
延迟时间 Turn-Off delay time	td(off)		-	46	102	ns
下降时间 Turn-Off rise time	tf		-	37	84	ns
栅极电荷总量 Total Gate Charge	Qg	VDS=480V, ID=4A, VGS=10V (注 4,5)	-	13.3	19	nc
栅-源电荷 Gate-Source charge	Qgs		-	3.6	-	nc
栅-漏电荷 Gate-Drain charge	Qgd		-	4.9	-	nc

漏-源二极管特征及最大额定值 Drain-Source Diode Characteristics and Maximum Ratings

正向最大连续电流 Maximum continuous Drain-Source Diode Forward Current	IS		-	-	4	A
正向最大脉冲电流 Maximum Pulsed Drain-Source Diode Forward Current	ISM		-	-	16	A
正向压降 Drain-Source Diode Forward Voltage	VSDF	VGS=0V, IS=4.0A	-	-	1.4	V
反向恢复时间 Reverse recovery time	Trr	VGS=0V, IS=4.0A dIF/dt=100A/us (note 4)	-	330	-	ns
反向恢复电荷 Reverse recovery charge	Qrr		-	2.67	-	μ C

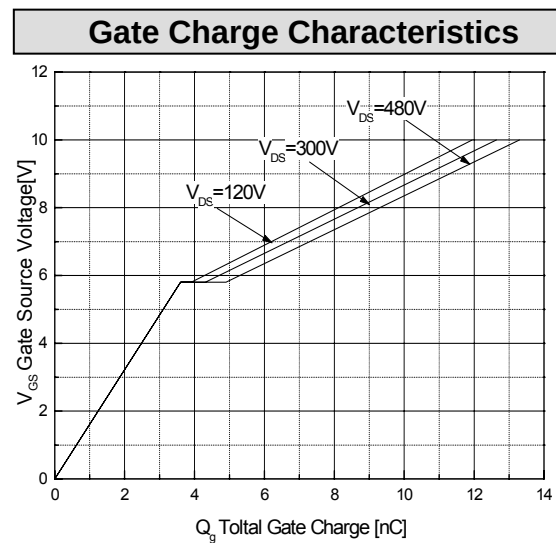
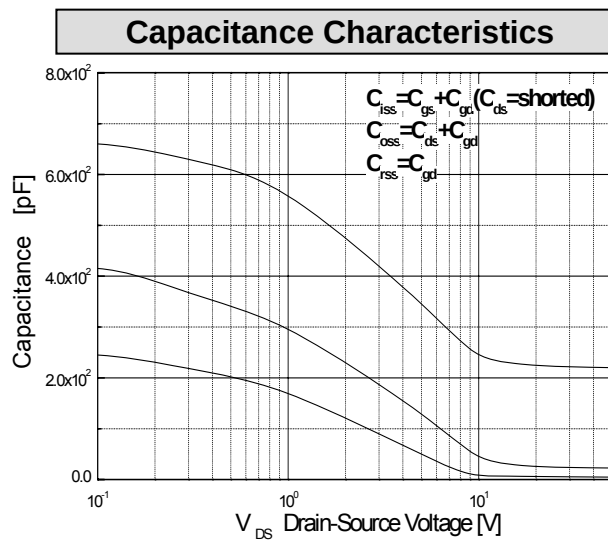
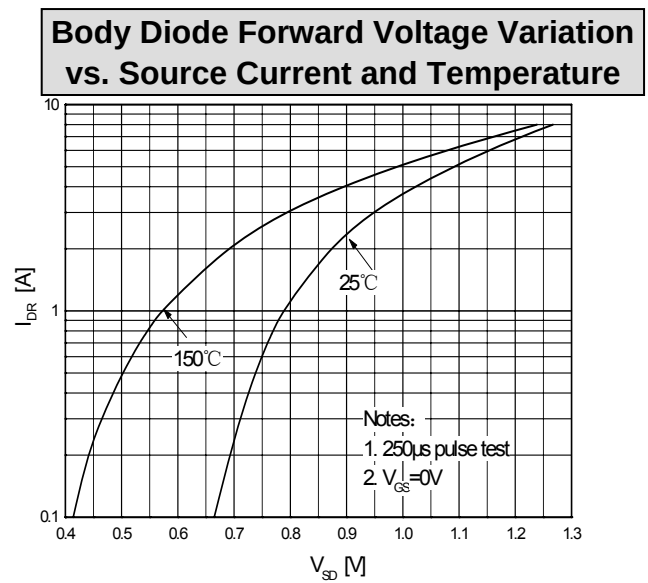
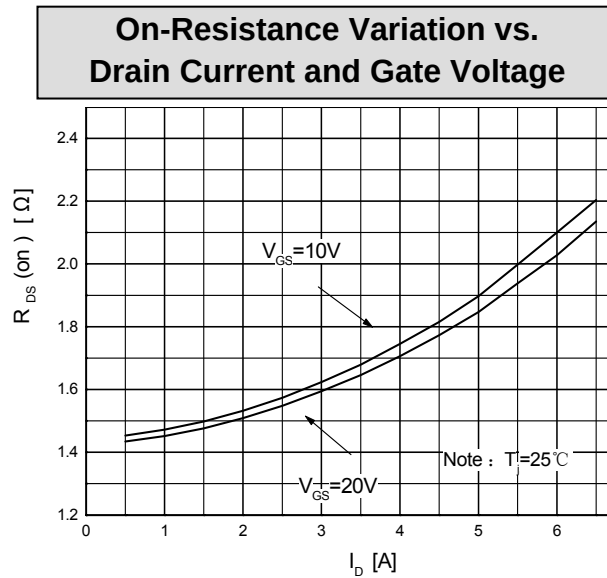
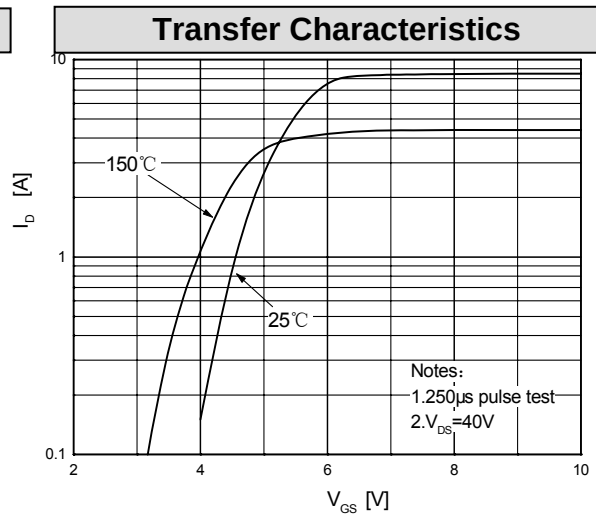
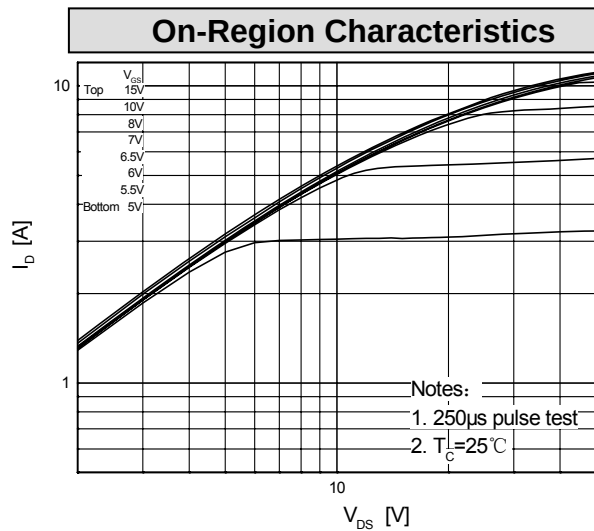
热特征 Thermal Characteristic

项目 Parameter	符号 Symbol	最大 (Max)		单位 (Unit)
		T0-220 (铁封)	T0-220F (塑封)	
结到管壳的热阻 Thermal Resistance, Junction to case	Rth(j-c)	1.25	3.79	℃ /W
结到环境的热阻 Thermal Resistance, Junction to Ambient	Rth(j-a)	62.5	62.5	℃ /W

注释：

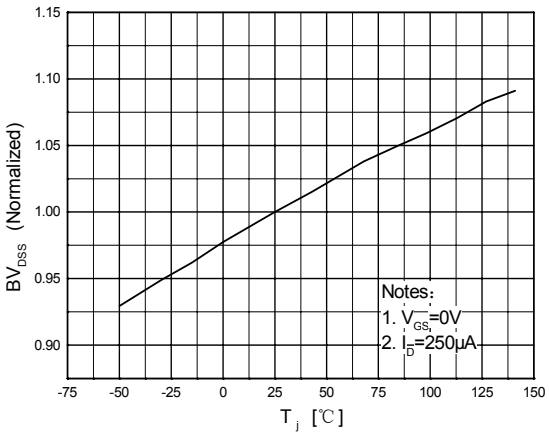
- 1: 脉冲宽度由最高结温限制
- 2: L=56mH, IAS=4.0A, VDD=50V, RG=25 Ω,起始结温 TJ=25℃
- 3: ISD ≤4A,di/dt ≤200A/μs,VDD≤BV_{DSS},起始结温 TJ=25℃
- 4: 脉冲测试：脉冲宽度≤300μs,占空比≤2%
- 5: 基本与工作温度无关

特征曲线 ELECTRICAL CHARACTERISTICS (curves)

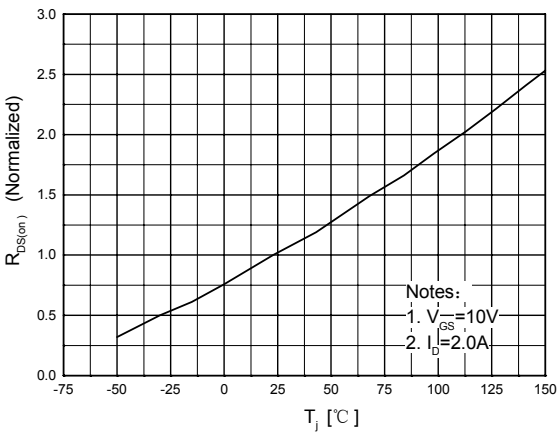


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

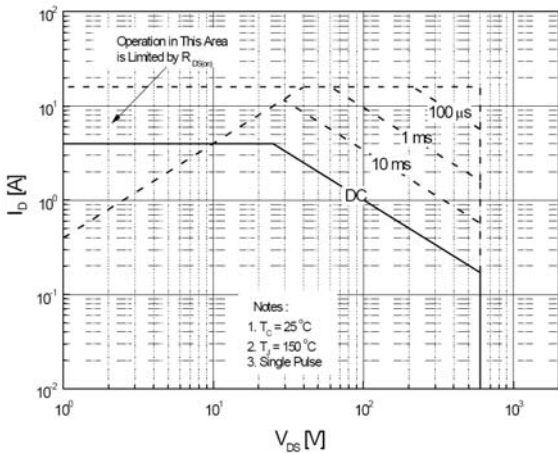
Breakdown Voltage Variation
vs. Temperature



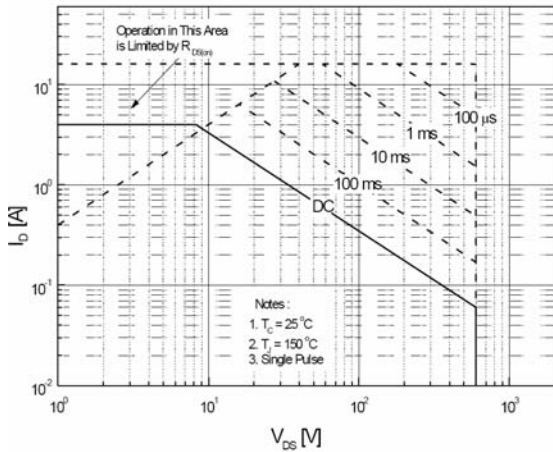
On-Resistance Variation
vs. Temperature



Maximum Safe Operating Area
For TO-220



Maximum Safe Operating Area
For TO-220F



Maximum Drain Current
vs. Case Temperature

