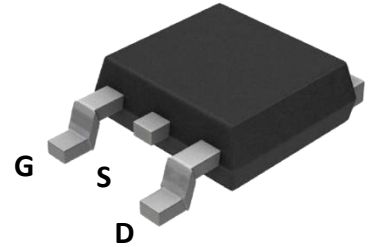


1200V N-channel GaN FET in TO252

GP1A215TS_252

产品摘要 (典型)	
R _{DS(on)} (mΩ)	93
I _D (A)	15
V _{DS} (V)	1200

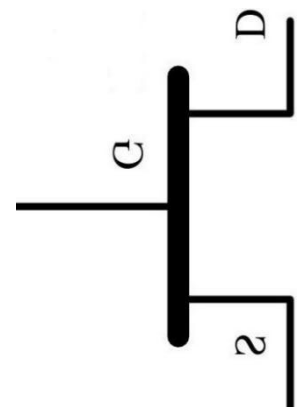


产品特点：

- 低 QRR
- 无需续流二极管
- 用于降低 EMI 的高端安静标签™
- 符合 RoHS 标准
- 高频操作

产品应用：

- 紧凑型 DC-DC 变换器
- 交流电机驱动
- 电池充电器
- 开关电源



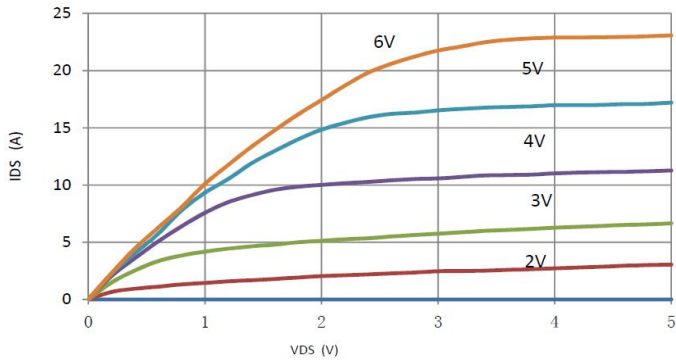
极限参数 (T _C =25 °C 若无特殊说明)			
符号	参数名称	极限值	单位
ID 25° C	漏极电流 (直流) @T _c =25 ° C	19.5	A
ID 125° C	漏极电流 (直流) @T _c =125 ° C	8.6	A
IDM	漏极脉冲电流 (pulse width:50 us)	39	A
VDSS	漏源击穿电压	1200	V
VGSS	栅源电压 (直流)	±6	V
TJ	结温工作温度	-55 to 150	° C
PD 25° C	漏极最大允许耗散功率	82.5	W
TS	贮存温度	-55 to 150	° C
TCsold	焊接峰值温度b	260	° C

耐热性			
符号	参数名称	典型值	单位
R θ JC	结壳热阻	1.6	° C /W

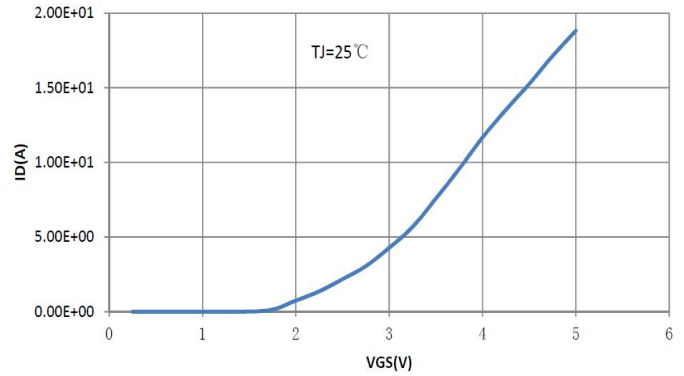
电气特性 (TC=25 ° C 若无特殊说明)

序号	参考符号	参数名称	测试条件	典型值	单位
静态参数					
1	Vgs(TH)	Gate Threshold Voltage	Vds=Vgs Id=3.5mA	1.19	V
2	BVdss	Drain-Source breakdown voltage	Vgs=0V	1345	V
3	Idss	Zero gate voltage drain current, TC = 25°C	Vgs=0V Vds=1000V	19.5	uA
4	Idss	Zero gate voltage drain current, TC = 150°C	Vgs=0V Vds=1000V	50	uA
5	Igss	Gate-Source Leakage	Vgs = 6V Vds =0V	37.5	uA
6	Rdson	static Drain-Source on resistance, TC = 25°C	Vgs=6V Id=2.5A	0.093	Ω
7	Rdson	static Drain-Source on resistance, TC = 150°C	Vgs=6V Id=2.5A	0.215	Ω
8	Vsd	Body diode forward voltage	I _{sd} =1A Vgs=0V	1.75	V
动态参数					
1	capacitance	Ciss	Vgs=0V	131	pf
		Coss	Vds=400V	33	pf
		Crss	f=1MHz	5	pf
3	Qg	Gate charge	Vds=400V	3.35	nC
	QgS		Id=7.5A	0.6	nC
	Qgd		Vgs=6V	0.7	nC
开关性能					
1	td(on)	Turn-on delay time	Vds=400V	5.2	ns
2	tr	Rise time	Id=2.5A	12	ns
3	td(off)	Turn-off delay time	Rg=10 Ω	16	ns
4	tf	Fall time	Vgs=6V	11	ns

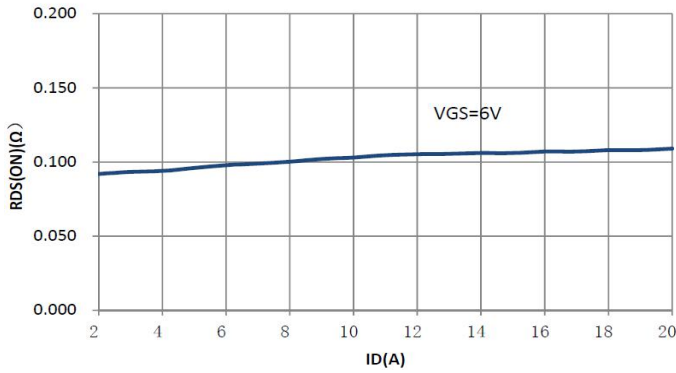
电特性曲线(TC=25°C):



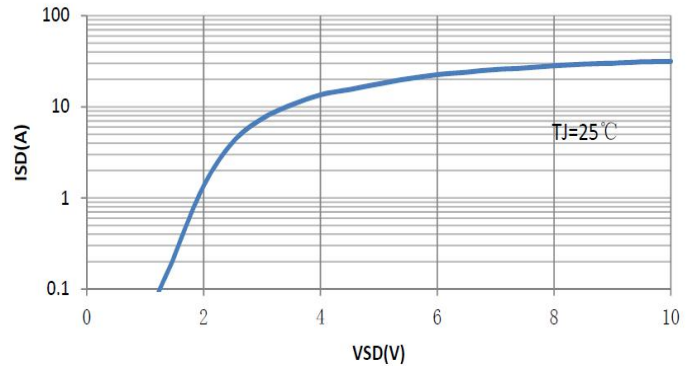
1. IDS-VGS 曲线



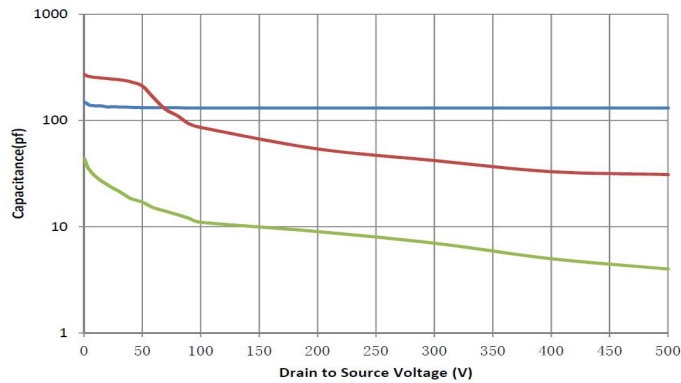
2. IDS-VGS 曲线



3. RDS(ON)-IDS 曲线

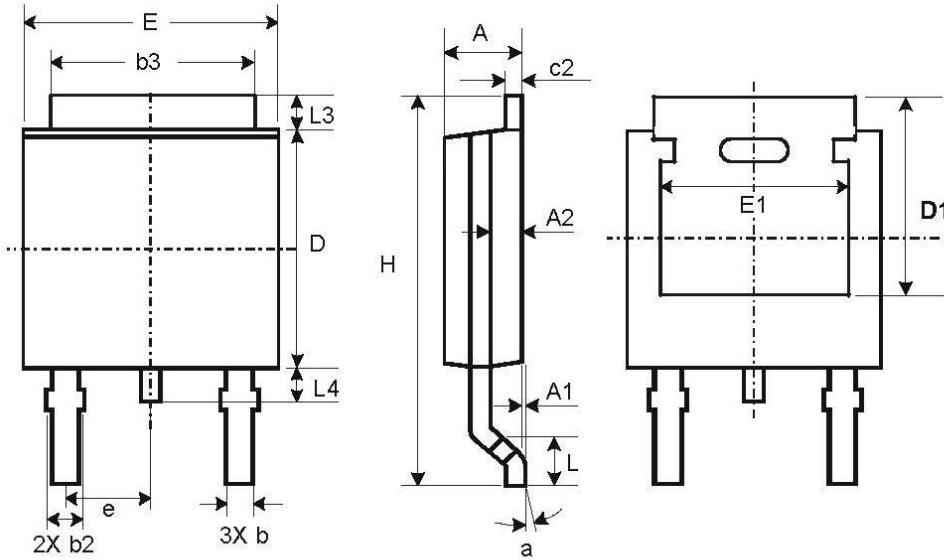


4. ISD-VSD 曲线



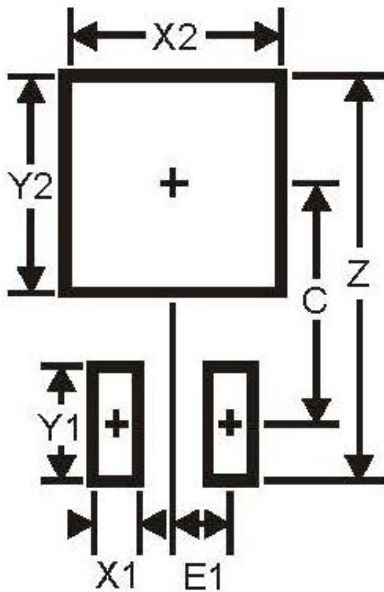
5. Capacitance-VDS 曲线

封装形式 (T0252 Unit: mm):



TO252			
Dim	Min	Max	Typ
A	2.19	2.39	2.29
A1	0.00	0.13	0.08
A2	0.97	1.17	1.07
b	0.64	0.88	0.783
b2	0.76	1.14	0.95
b3	5.21	5.46	5.33
c2	0.45	0.58	0.531
D	6.00	6.20	6.10
D1	5.21	-	-
e	-	-	2.286
E	6.45	6.70	6.58
E1	4.32	-	-
H	9.40	10.41	9.91
L	1.40	1.78	1.59
L3	0.88	1.27	1.08
L4	0.64	1.02	0.83
a	0°	10°	-
All Dimensions in mm			

建议焊盘布局:



Dimensions	Value (in mm)
Z	11.6
X1	1.5
X2	7.0
Y1	2.5
Y2	7.0
C	6.9
E1	2.3