



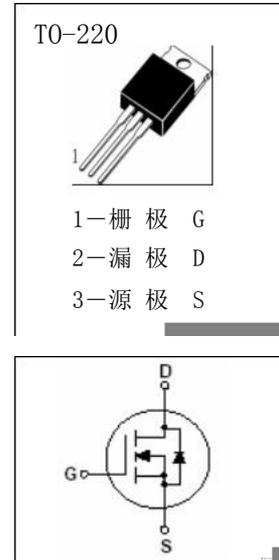
■ 主要用途

高速开关应用。DC/DC转换器及 DC马达控制等。

■ 极限值 (Ta=25°C)

T _{stg}	—贮存温度·····	-55~165°C
T _j	—结温·····	150°C
V _{DSS}	—漏极—源极电压·····	60V
V _{GS}	—栅极—源极电压·····	±20V
I _D	—漏极电流 (T _c =25°C) ·····	60A
I _{DM}	—漏极电流 (脉冲) (注 1) ·····	240A
P _D	—耗散功率 (T _c =25°C) ·····	150W

■ 外形图及引脚排列



■ 电参数 (Ta=25°C)

参数符号	符号说明	最小值	典型值	最大值	单位	测试条件
BV _{DSS}	漏—源极击穿电压	60			V	I _D =250 μA, V _{GS} =0V
I _{DSS}	零栅压漏极电流			1	μA	V _{DS} =60V, V _{GS} =0
I _{GSS}	栅极泄漏电流			±100	nA	V _{GS} =±20V, V _{DS} =0V
V _{GS(th)}	栅—源极开启电压	2.0		4.0	V	V _{DS} =V _{GS} , I _D =250 μA
R _{DS(on)}	漏—源极导通电阻			11.5	mΩ	V _{GS} =10V, I _D =30A (注 2)
C _{iss}	输入电容		2350		pF	V _{DS} =25V, V _{GS} =0, f=1MHz
C _{oss}	输出电容		237		pF	
C _{rss}	反向传输电容		205		pF	
t _{d(on)}	导通延迟时间		16		nS	V _{DS} =30V, V _{GS} =10V R _{th(j-c)} =15 Ω R _G =2.5 Ω (注 2)
t _r	上升时间		10		nS	
t _{d(off)}	断开延迟时间		45		nS	
t _f	下降时间		12		nS	
Q _g	栅极总电荷		50		nC	V _{DS} =30V V _{GS} =10V I _D =30A (注 2)
Q _{gs}	栅极—源极电荷		12		nC	
Q _{gd}	栅极—漏极电荷		16		nC	
V _{SD}	源极—漏极二极管导通电压			1.2	V	I _S =30A, V _{GS} =0
R _{th(j-c)}	热阻			1.13	°C/W	结到外壳

*注 1: 漏极电流受最大结温限制。

*注 2: 脉冲测试, 宽度≤300 μS, 占空比≤2%



特性曲线

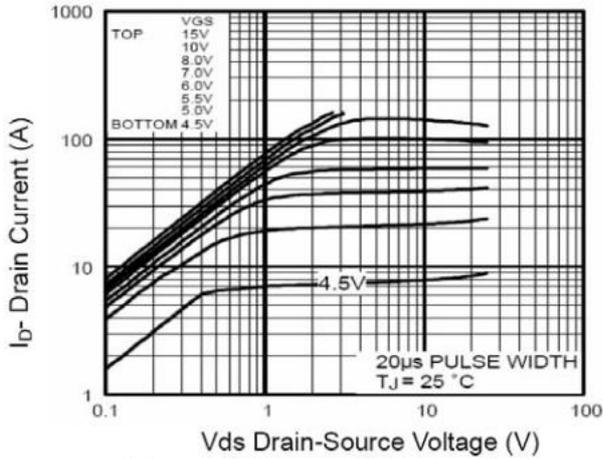


Figure 1 Output Characteristics

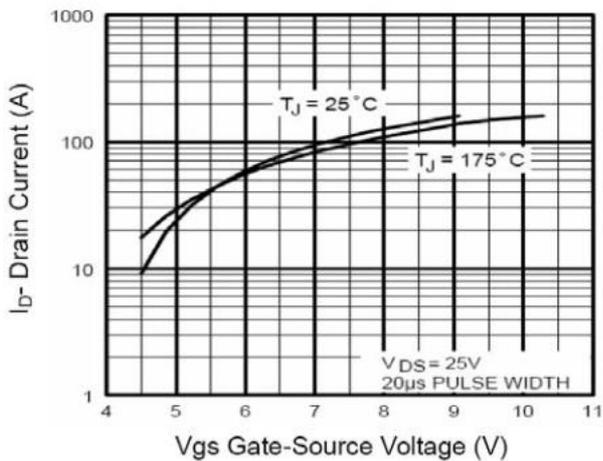


Figure 2 Transfer Characteristics

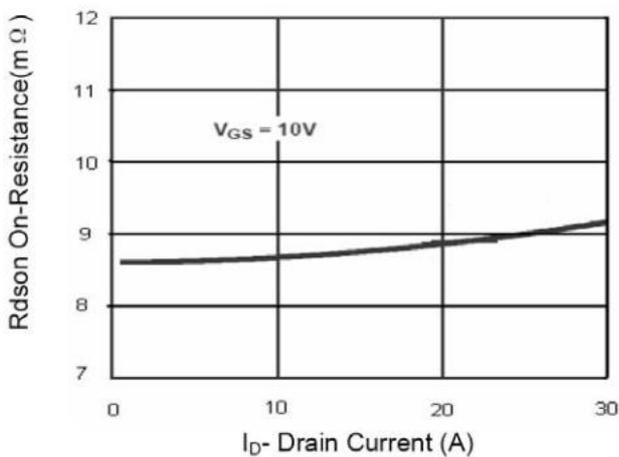


Figure 3 Rdson- Drain Current

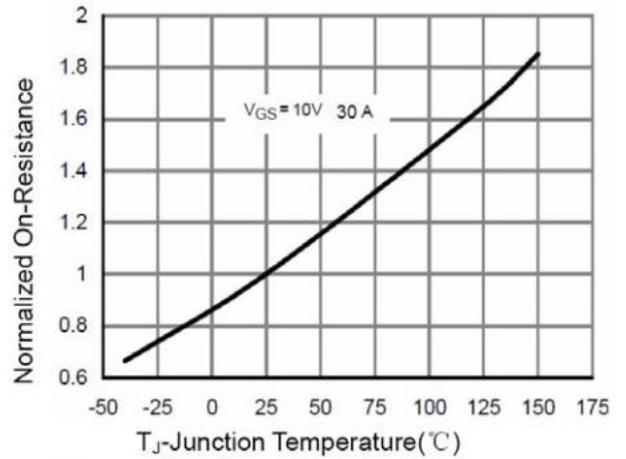


Figure 4 Rdson-Junction Temperature

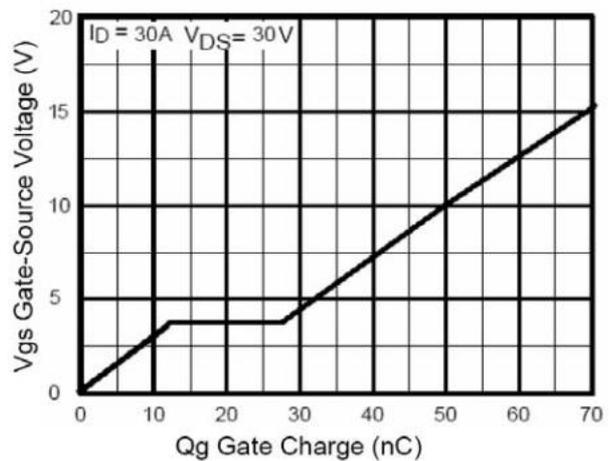


Figure 5 Gate Charge

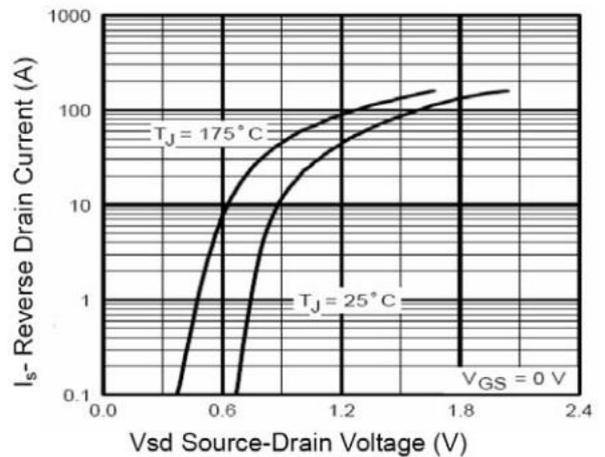


Figure 6 Source- Drain Diode Forward



特性曲线

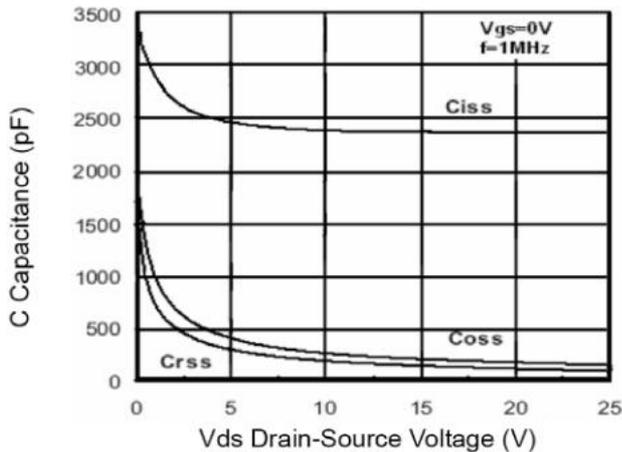


Figure 7 Capacitance vs Vds

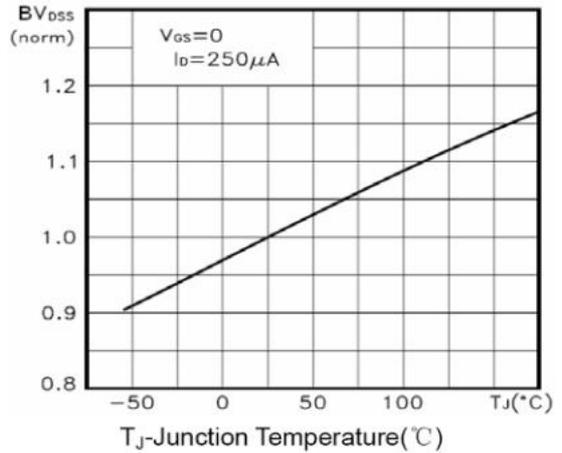


Figure 9 BV_{DSS} vs Junction Temperature

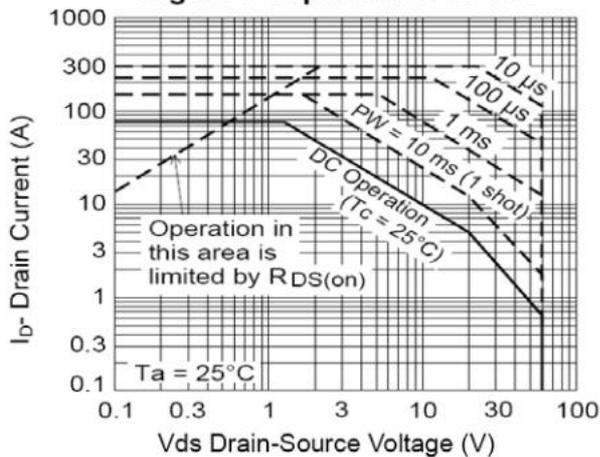


Figure 8 Safe Operation Area

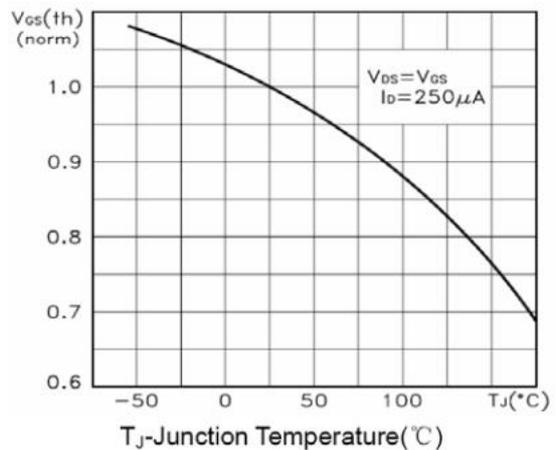


Figure 10 $V_{GS(th)}$ vs Junction Temperature

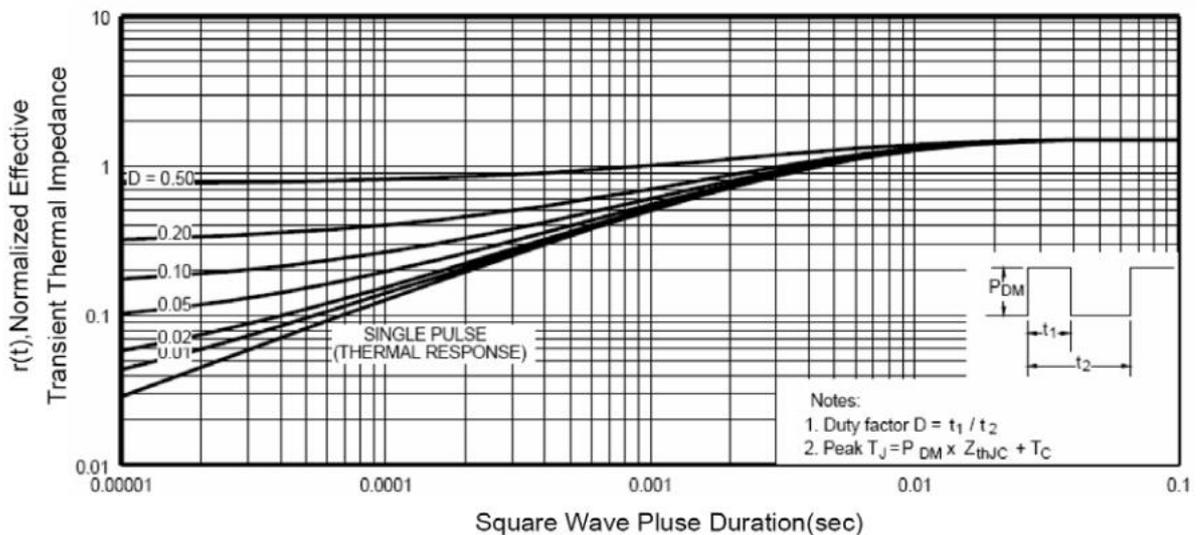
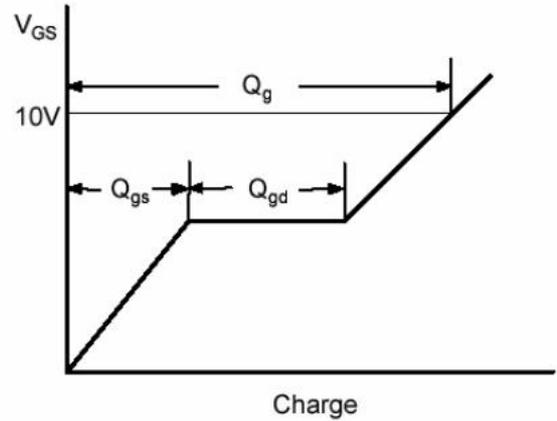
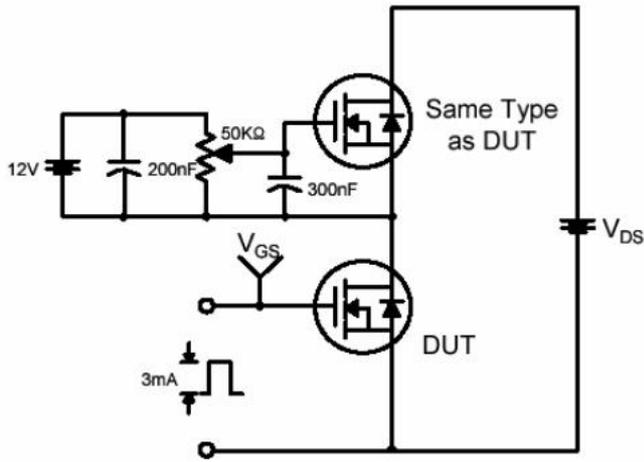


Figure 11 Normalized Maximum Transient Thermal Impedance

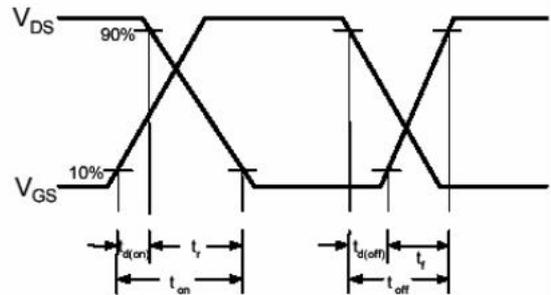
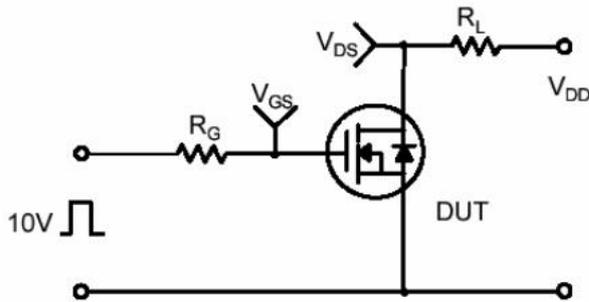


■ 特性曲线

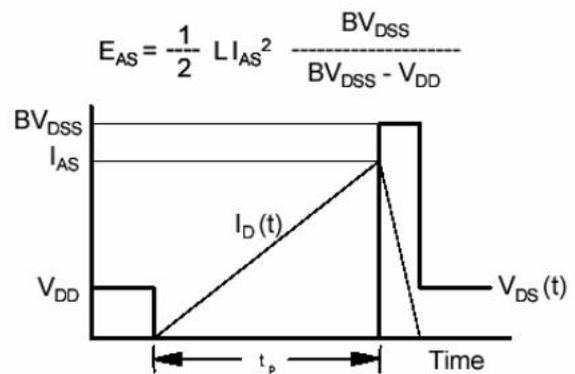
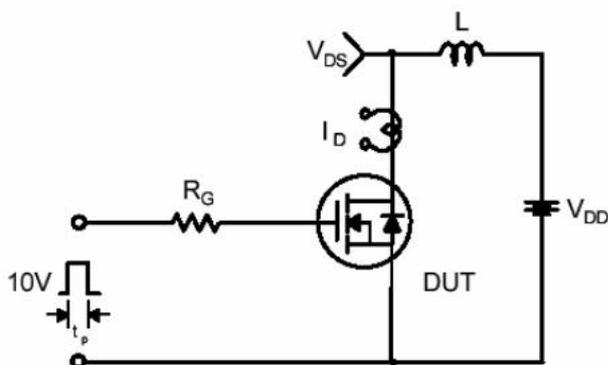
Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms



Unclamped Inductive Switching Test Circuit & Waveforms





■ 特性曲线

Peak Diode Recovery dv/dt Test Circuit & Waveforms

