



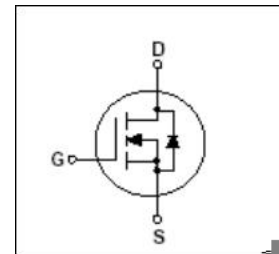
■ 主要用途

高速开关应用。

■ 极限值 (Ta=25°C)

T _{stg}	—贮存温度	.....	-55~150°C
T _j	—结温	.....	150°C
V _{DSS}	—漏极—源极电压	.....	55V
V _{GS}	—栅极—源极电压	.....	±20V
I _D	—漏极电流 (T _c =25°C)	.....	100A
P _D	—耗散功率 (T _c =25°C)	.....	175W

■ 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	55			V	I _D =250 μA、V _{GS} =0	
I _{DSS}	零栅压漏极电流			25	μA	V _D =55V、V _{GS} =0	
I _{GSS}	栅极泄漏电流			100	nA	V _{GS} =±20V、V _D =0	
V _{GS(th)}	栅—源极开启电压	2.0		4.0	V	V _D =V _{GS} 、I _D =250 μA	
R _{DS(on)}	漏—源极导通电阻			9	mΩ	V _{GS} =10V、I _D =59A(Figure4)	
C _{iss}	输入电容		4000		pF	V _D =25V、V _{GS} =0、f=1MHz (Figure 5)	
C _{oss}	输出电容		1300		pF		
C _{rss}	反向传输电容		480		pF		
T _{d(on)}	导通延迟时间		14		ns		V _D =28V、I _D ≤59A
T _r	上升时间		100		ns		V _{GS} = 10V、R _L = 0.47 Ω
T _{d(off)}	断开延迟时间		43		ns	R _{GS} = 2.5 Ω	
T _f	下降时间		70		ns	V _D =44V、I _D ≤59A V _{GS} =10V、I _{g(REF)} = 3mA (Figure 6)	
Q _g	栅极总电荷			170	nC		
Q _{gs}	栅极—源极电荷			32	nC		
Q _{gd}	栅极—漏极电荷			74	nC		
I _S	源极—漏极二极管正向电流			100	A		
V _{SD}	源极—漏极二极管导通电压			1.3	V	I _{SD} = 59A , V _{GS} =0	
R _{th(j-c)}	热阻			1.25	°C/W	结到外壳	

注：1、脉冲测试，宽度≤300 μS, 占空比≤2%



■ 典型特性曲线

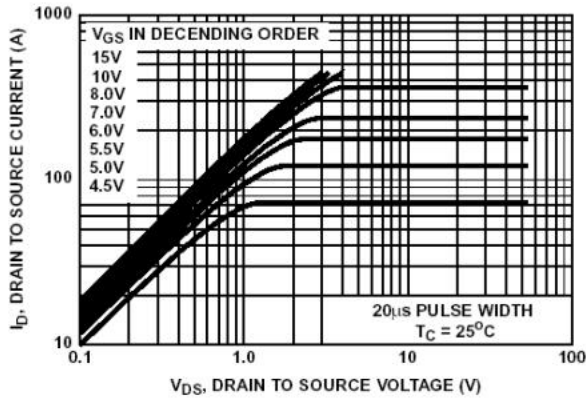


FIGURE 1. OUTPUT CHARACTERISTICS

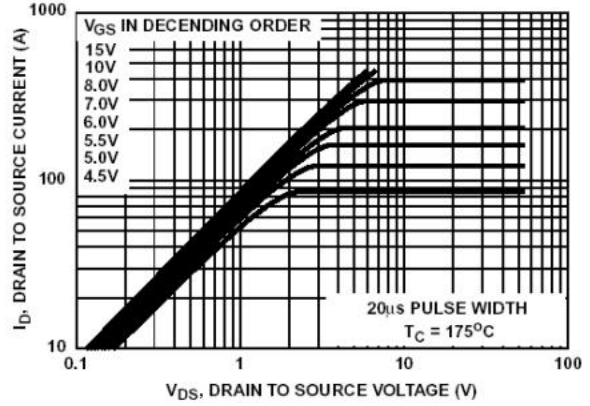


FIGURE 2. OUTPUT CHARACTERISTICS

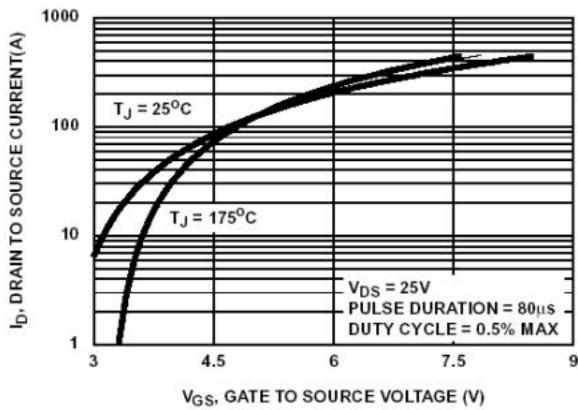


FIGURE 3. TRANSFER CHARACTERISTICS

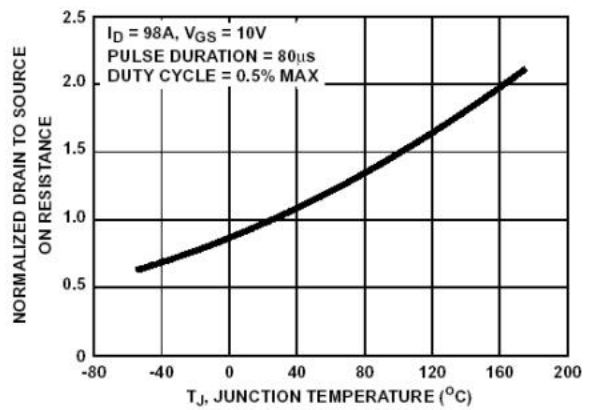


FIGURE 4. NORMALIZED DRAIN TO SOURCE ON RESISTANCE vs JUNCTION TEMPERATURE



典型特性曲线

Typical Performance Curves (Continued)

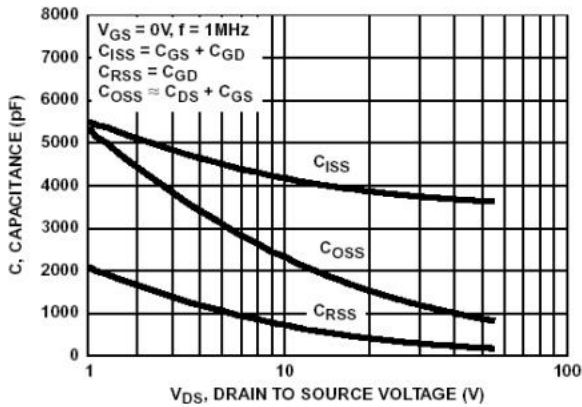


FIGURE 5. CAPACITANCE vs DRAIN TO SOURCE VOLTAGE

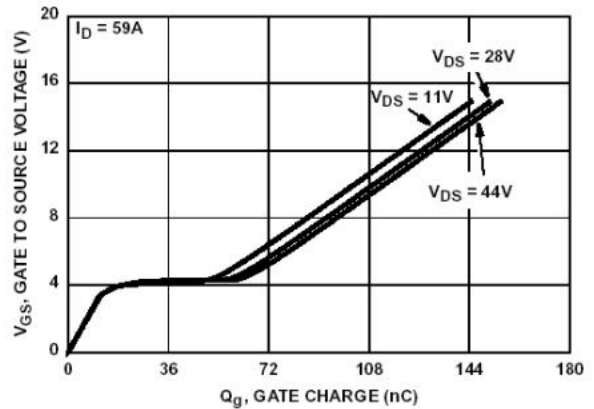


FIGURE 6. GATE CHARGE WAVEFORMS FOR CONSTANT GATE CURRENT

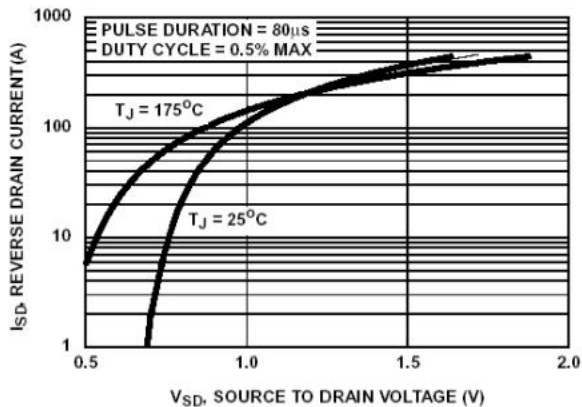


FIGURE 7. SOURCE TO DRAIN DIODE FORWARD VOLTAGE

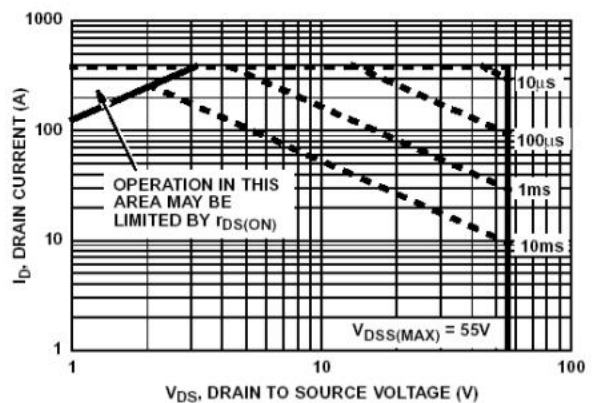


FIGURE 8. FORWARD BIAS SAFE OPERATING AREA

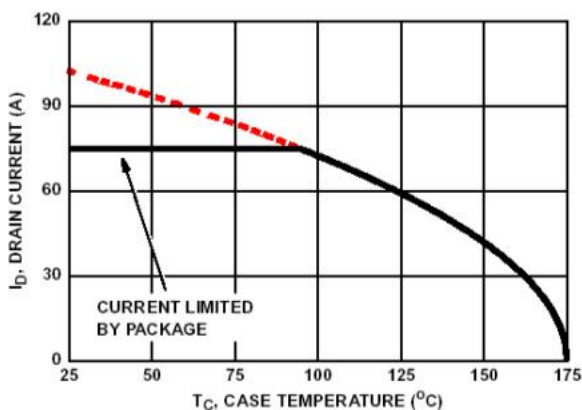


FIGURE 9. MAXIMUM CONTINUOUS DRAIN CURRENT vs CASE TEMPERATURE

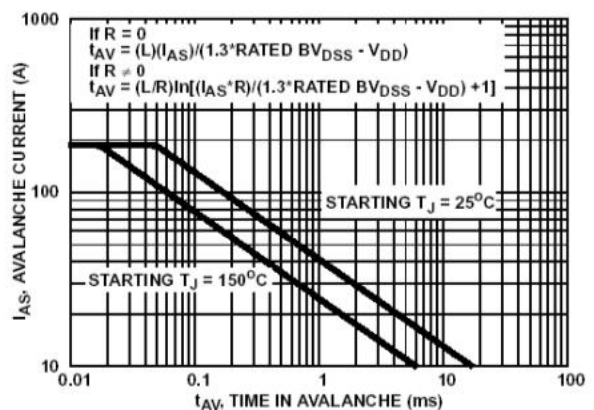


FIGURE 10. UNCLAMPED INDUCTIVE SWITCHING CAPABILITY



典型特性曲线

Typical Performance Curves (Continued)

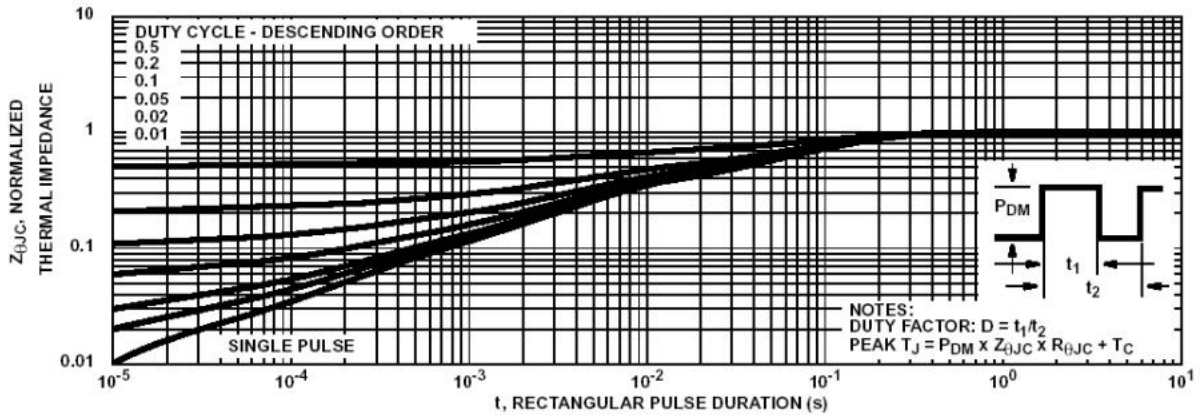


FIGURE 11. NORMALIZED MAXIMUM TRANSIENT THERMAL IMPEDANCE

Test Circuits and Waveforms

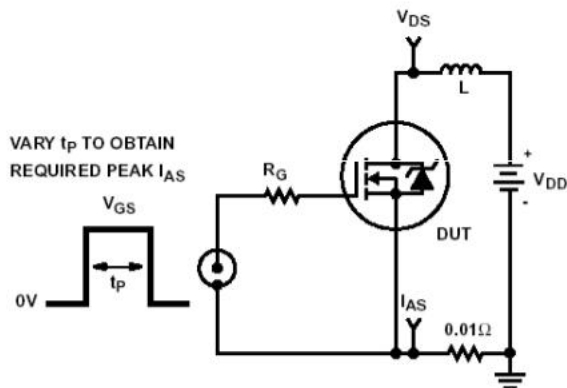


FIGURE 12. UNCLAMPED ENERGY TEST CIRCUIT

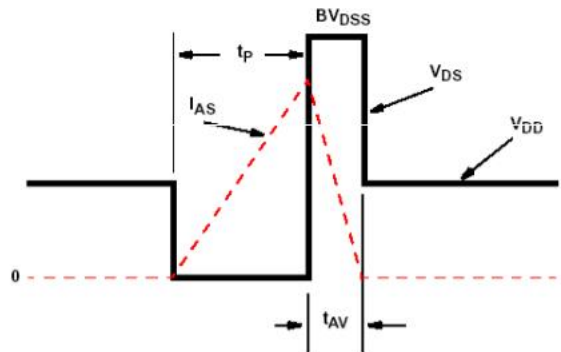


FIGURE 13. UNCLAMPED ENERGY WAVEFORMS

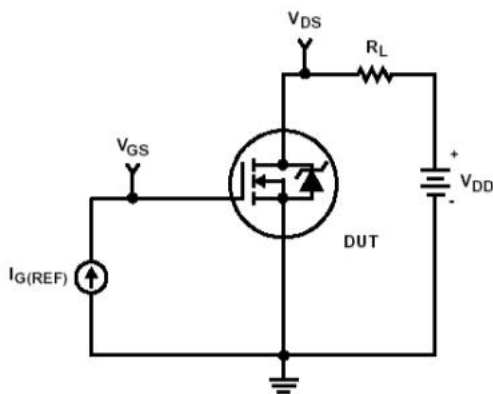


FIGURE 14. GATE CHARGE TEST CIRCUIT

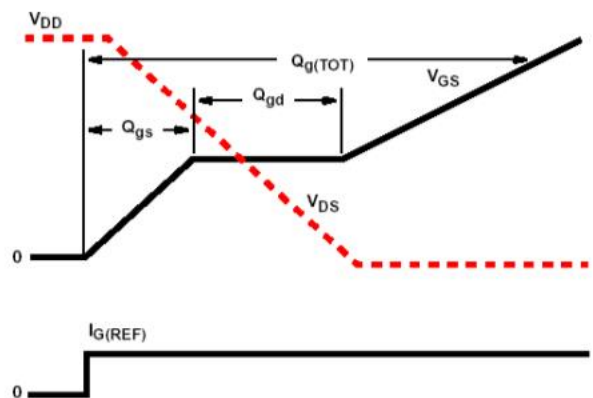


FIGURE 15. GATE CHARGE WAVEFORM



■ 典型特性曲线

Test Circuits and Waveforms (Continued)

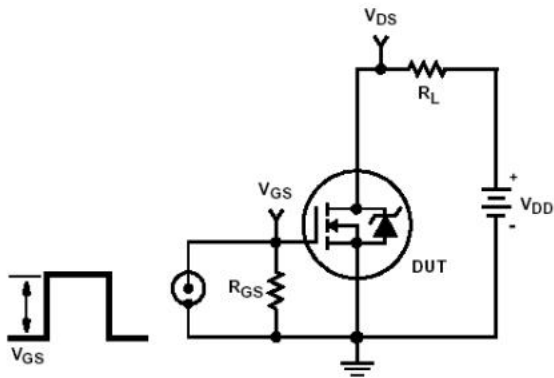


FIGURE 16. SWITCHING TIME TEST CIRCUIT

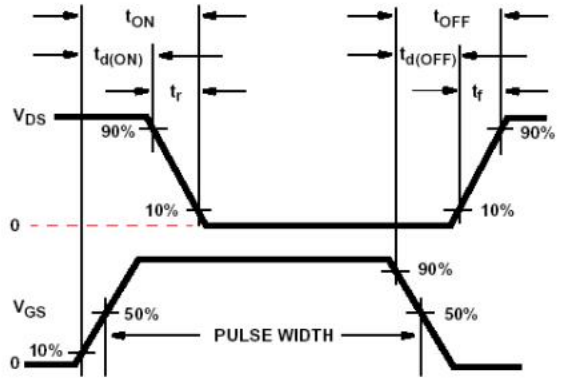


FIGURE 17. RESISTIVE SWITCHING WAVEFORMS