



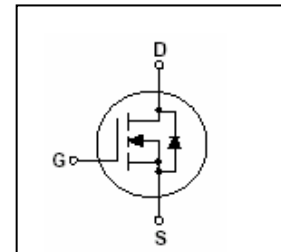
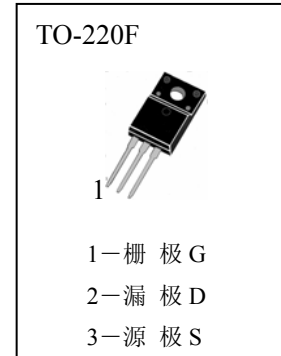
■ 主要用途

高速开关应用。

■ 极限值 ($T_a=25^{\circ}\text{C}$)

T_{stg} ——贮存温度	.....	-55~150 $^{\circ}\text{C}$
T_j ——结温	.....	150 $^{\circ}\text{C}$
V_{DSS} ——漏极—源极电压	.....	600V
V_{GS} ——栅极—源极电压	.....	$\pm 30\text{V}$
I_D ——漏极电流 ($T_c=25^{\circ}\text{C}$)	.....	10.8A
I_{DM} ——漏极电流 (脉冲) (注 1)	.....	32.4A
P_D ——耗散功率 ($T_c=25^{\circ}\text{C}$)	.....	32.1W

■ 外形图及引脚排列



■ 电参数 ($T_a=25^{\circ}\text{C}$)

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	600			V	$I_D=250\mu\text{A}, V_{GS}=0$
I_{DSS}	零栅压漏极电流			1.0	μA	$V_{DS}=600\text{V}, V_{GS}=0$
I_{GSS}	栅极泄漏电流			± 100	nA	$V_{GS}=\pm 30\text{V}, V_{DS}=0$
$V_{GS(th)}$	栅—源极开启电压	2.0		4.0	V	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$
$R_{DS(on)}$	漏—源极导通电阻			0.75	Ω	$V_{GS}=10\text{V}, I_D=5\text{A}$
C_{iss}	输入电容		1130	1505	pF	} $V_{DS}=100\text{V}, V_{GS}=0, f=1\text{MHz}$
C_{oss}	输出电容		45	60	pF	
C_{rss}	反向传输电容		3	5	pF	
$T_d(on)$	导通延迟时间		13.6	37.2	ns	} $V_{DD}=380\text{V}, I_D=5.4\text{A}$ $R_G=4.7\Omega$ (注 2)
T_r	上升时间		9.1	28.2	ns	
$T_d(off)$	断开延迟时间		42	94	ns	
T_f	下降时间		10	30	ns	
Q_g	栅极总电荷		27.4	35.6	nC	} $V_{DS}=380\text{V},$ $V_{GS}=10\text{V},$ $I_D=5.4\text{A}$ (注 2)
Q_{gs}	栅极—源极电荷		4.9		nC	
Q_{gd}	栅极—漏极电荷		8.8		nC	
I_S	源极—漏极二极管正向电流			10.8	A	
V_{SD}	源极—漏极二极管导通电压			1.2	V	$I_S=5.4\text{A}, V_{GS}=0$
$R_{th(j-c)}$	热阻			3.9	$^{\circ}\text{C/W}$	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 $\leq 300\mu\text{S}$, 占空比 $\leq 2\%$



典型特性曲线

Figure 1. On-Region Characteristics

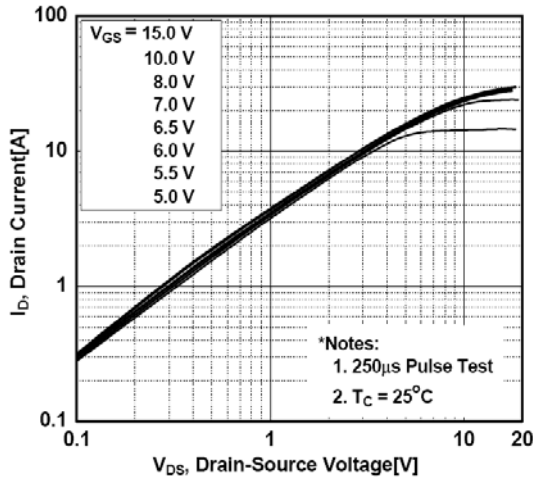


Figure 2. Transfer Characteristics

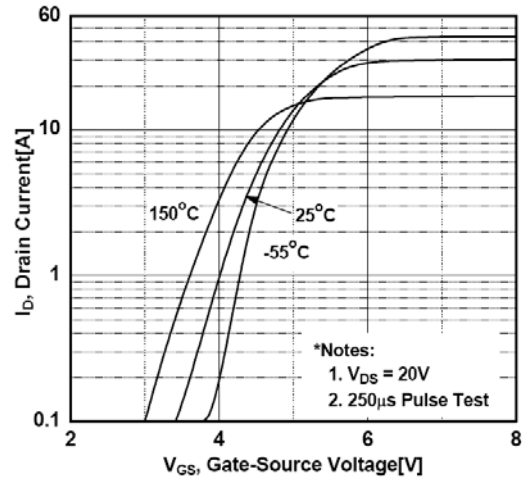


Figure 3. On-Resistance Variation vs. Drain Current and Gate Voltage

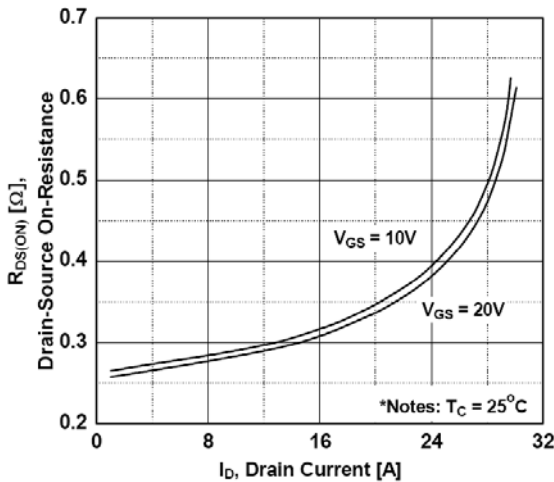


Figure 4. Body Diode Forward Voltage Variation vs. Source Current and Temperature

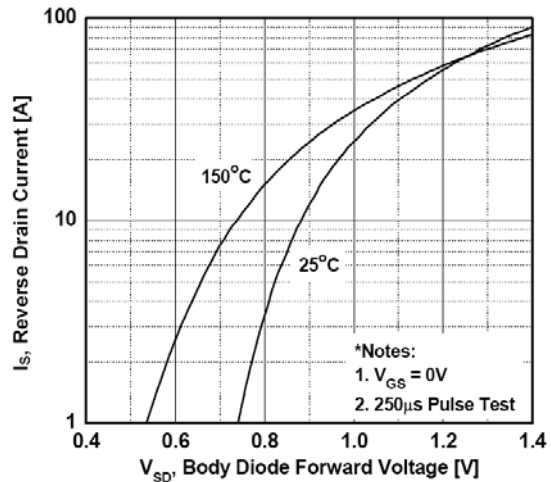


Figure 5. Capacitance Characteristics

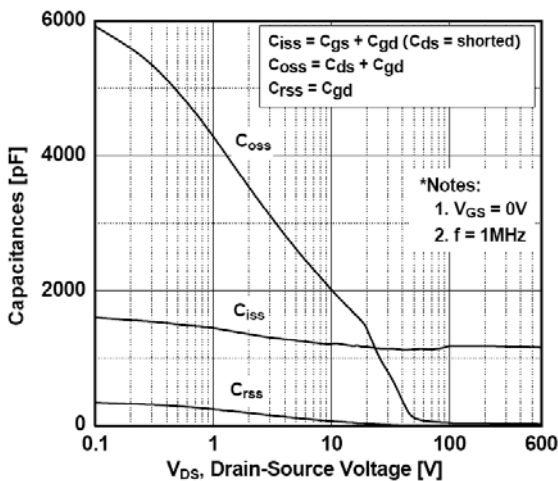
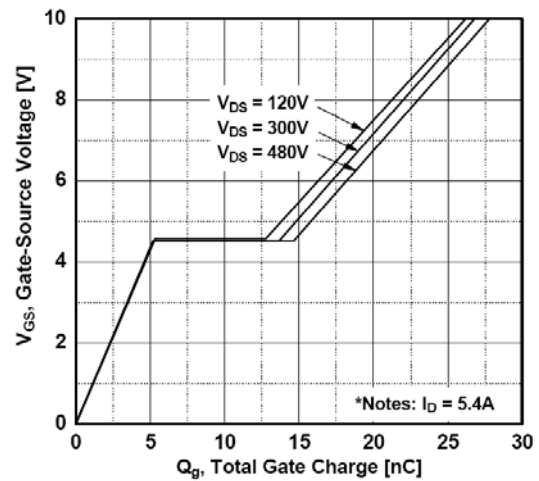


Figure 6. Gate Charge Characteristics





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Figure 7. Breakdown Voltage Variation vs. Temperature

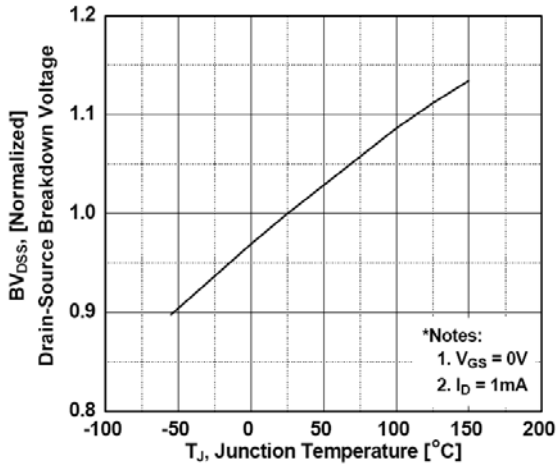


Figure 8. On-Resistance Variation vs. Temperature

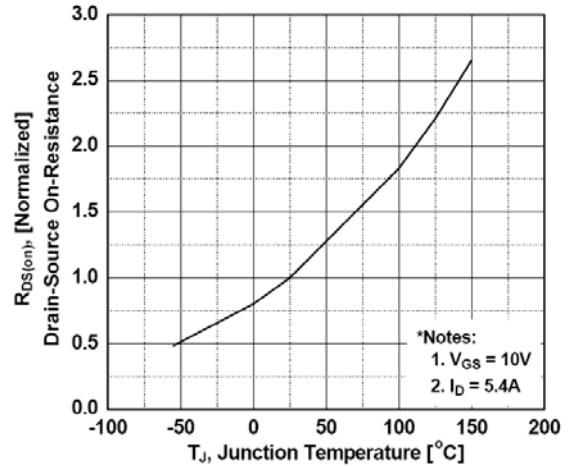


Figure 9. Maximum Safe Operating Area

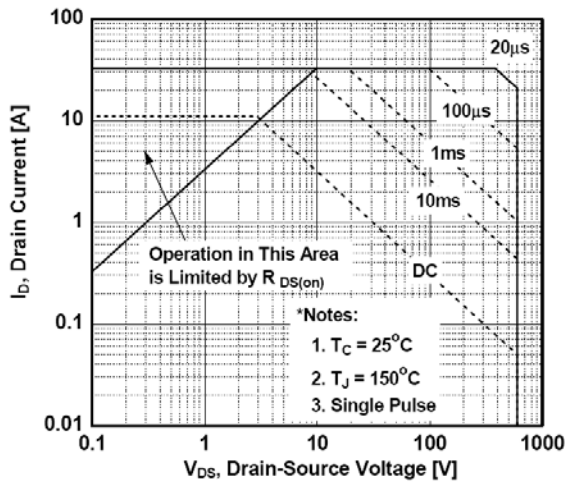


Figure 10. Maximum Drain Current vs. Case Temperature

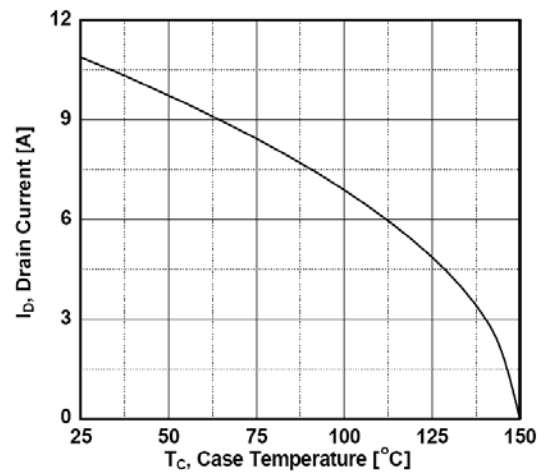
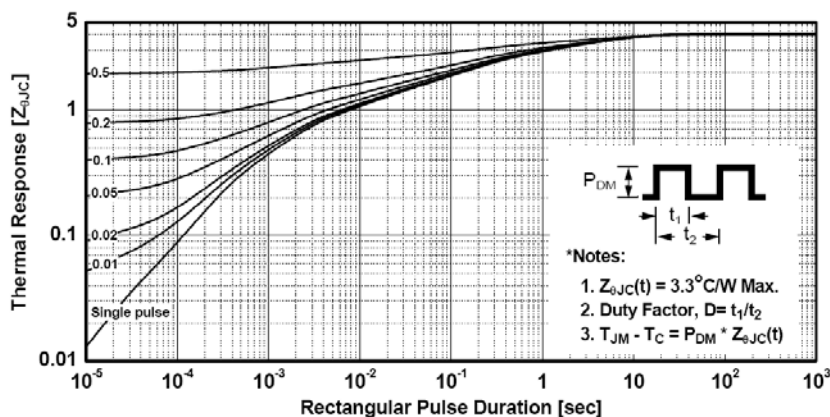


Figure 11. Transient Thermal Response Curve





■ 典型特性曲线

Fig 12. Gate Charge Test Circuit & Waveform

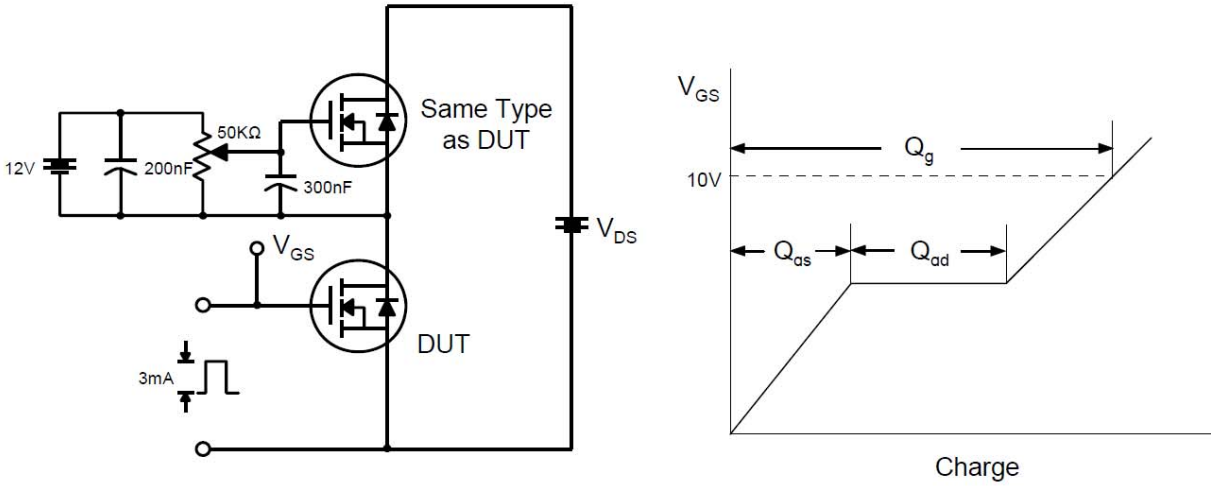


Fig 13. Resistive Switching Test Circuit & Waveforms

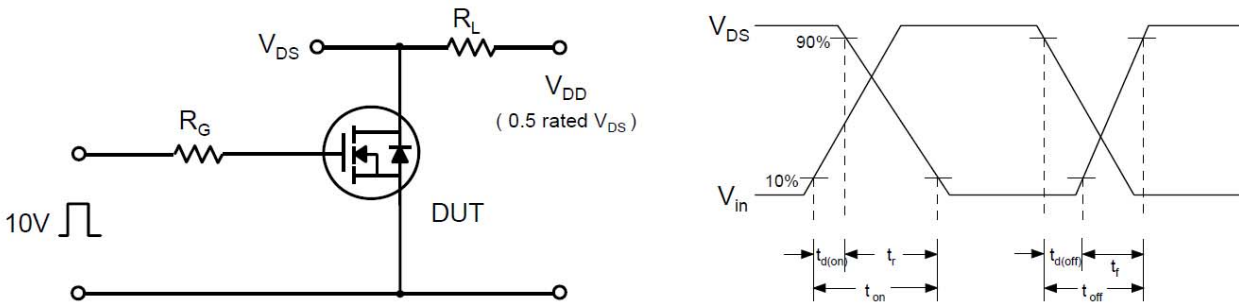
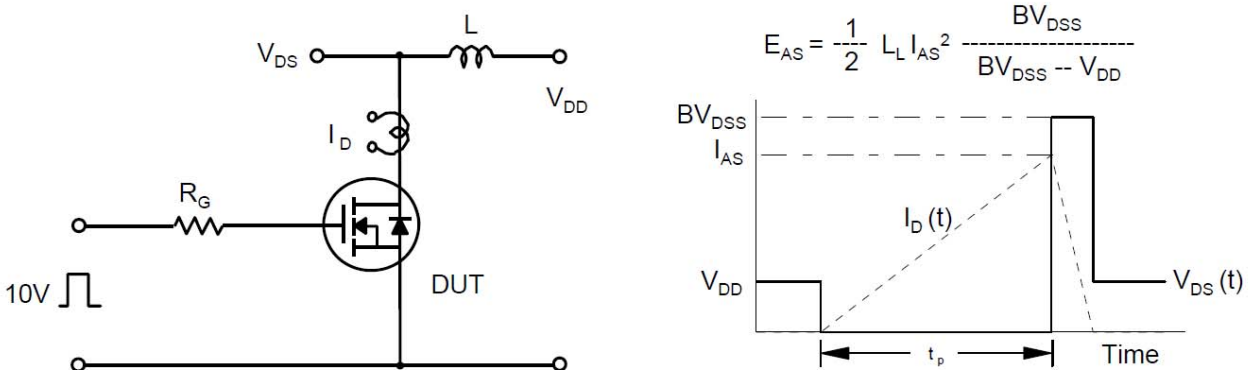


Fig 14. Unclamped Inductive Switching Test Circuit & Waveforms





■ 典型特性曲线

Fig 15. Peak Diode Recovery dv/dt Test Circuit & Waveforms

