



# STS110N03

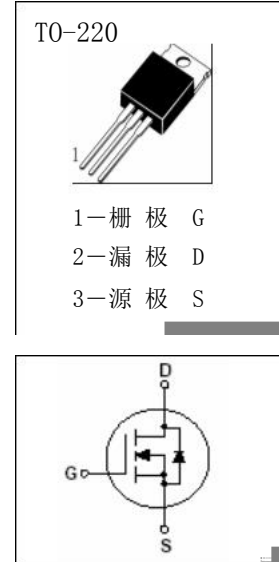
## 主要用途

高速开关应用。DC/DC转换器、电源管理等。

## 极限值 (Ta=25°C)

T <sub>stg</sub>	—贮存温度	.....	-55~150°C
T <sub>j</sub>	—结温	.....	150°C
V <sub>DSS</sub>	—漏极—源极电压	.....	30V
V <sub>GS</sub>	—栅极—源极电压	.....	±20V
I <sub>D</sub>	—漏极电流 (T <sub>c</sub> =25°C)	.....	110A
I <sub>DM</sub>	—漏极电流 (脉冲) (注 1)	.....	432A
P <sub>D</sub>	—耗散功率 (T <sub>c</sub> =25°C)	.....	107W

## 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 <sub>DSS</sub>	漏—源极击穿电压	30			V	I <sub>D</sub> =250 μA, V <sub>GS</sub> =0V
I <sub>DSS</sub>	零栅压漏极电流			1	μA	V <sub>DS</sub> =30V, V <sub>GS</sub> =0
I <sub>GSS</sub>	栅极泄漏电流			±100	nA	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V
V <sub>GS(th)</sub>	栅—源极开启电压	1.0		3.0	V	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250 μA
R <sub>DS(on)</sub>	漏—源极导通电阻		4.5	7	mΩ	V <sub>GS</sub> =10V, I <sub>D</sub> =40A
R <sub>DS(on)</sub>	漏—源极导通电阻		5.5	8	mΩ	V <sub>GS</sub> =5V, I <sub>D</sub> =25A
C <sub>iss</sub>	输入电容		3200		pF	V <sub>DS</sub> =25V, V <sub>GS</sub> =0, f=1MHz
C <sub>oss</sub>	输出电容		580		pF	
C <sub>rss</sub>	反向传输电容		400		pF	
t <sub>d(on)</sub>	导通延迟时间		24		nS	V <sub>DS</sub> =15V, V <sub>GS</sub> =5V R <sub>θ</sub> =0.6 Ω R <sub>θ</sub> =10 Ω (注 2)
t <sub>r</sub>	上升时间		102		nS	
t <sub>d(off)</sub>	断开延迟时间		53		nS	
t <sub>f</sub>	下降时间		54		nS	V <sub>DS</sub> =15V V <sub>GS</sub> =5V I <sub>D</sub> =40A (注 2)
Q <sub>g</sub>	栅极总电荷		56		nC	
Q <sub>gs</sub>	栅极—源极电荷		16		nC	
Q <sub>gd</sub>	栅极—漏极电荷		14		nC	I <sub>S</sub> =108A, V <sub>GS</sub> =0
V <sub>SD</sub>	源极—漏极二极管导通电压			1.25	V	
R <sub>th(j-c)</sub>	热阻			1.4	°C/W	结到外壳

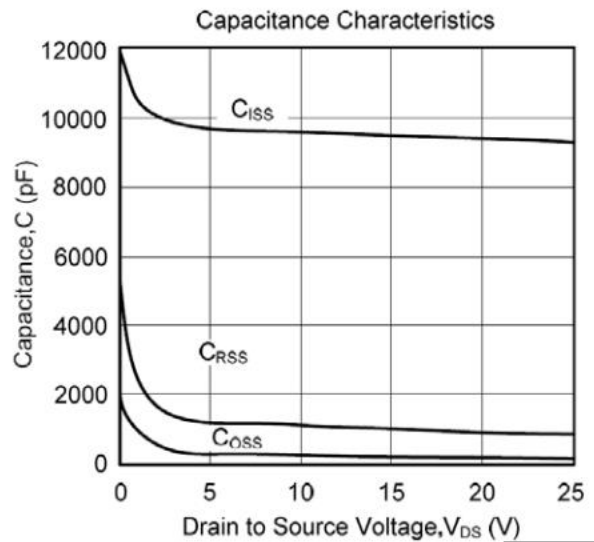
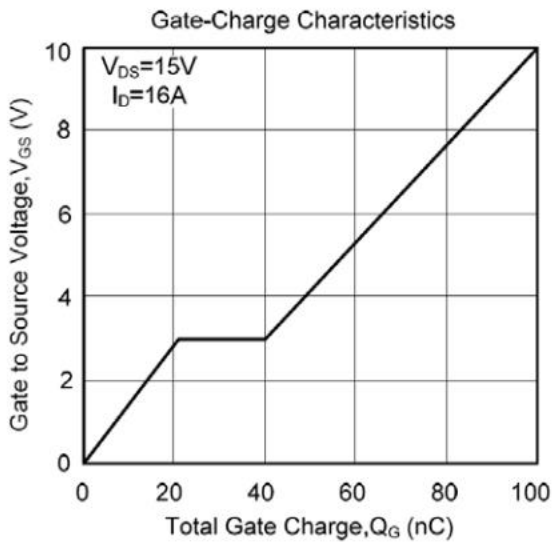
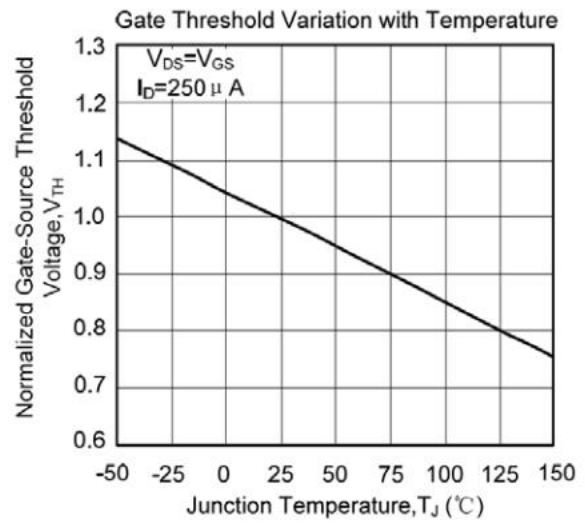
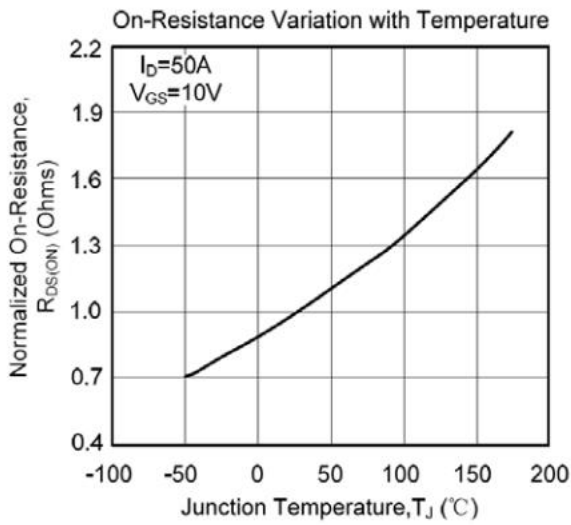
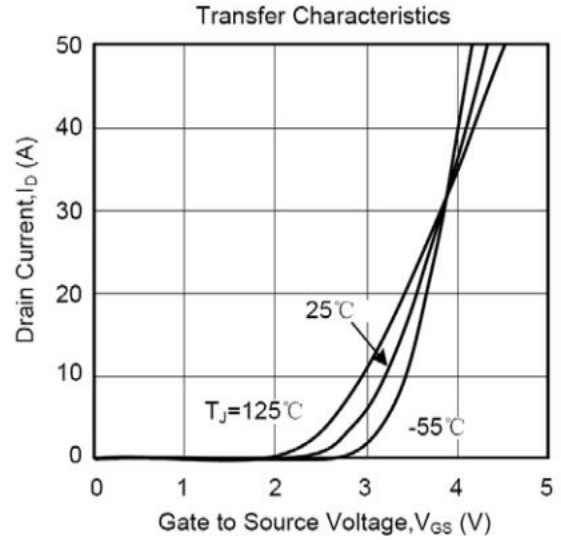
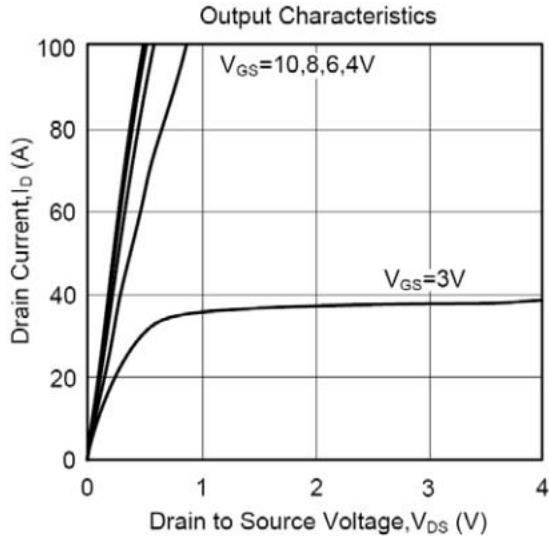
\*注 1: 漏极电流受最大结温限制。

\*注 2: 脉冲测试, 宽度 ≤ 300 μS, 占空比 ≤ 2%



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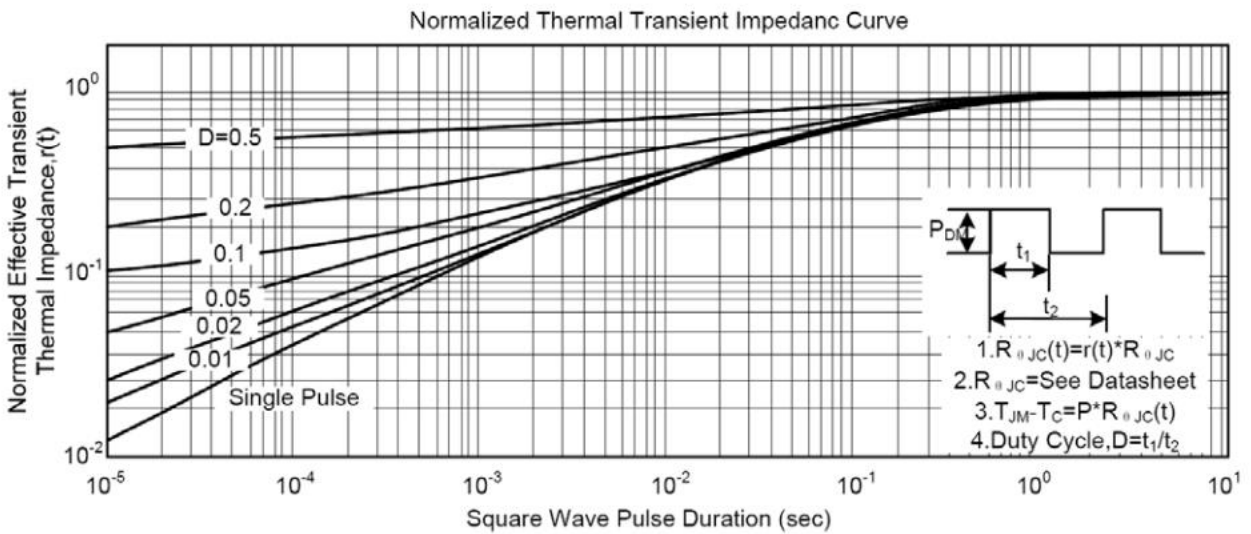
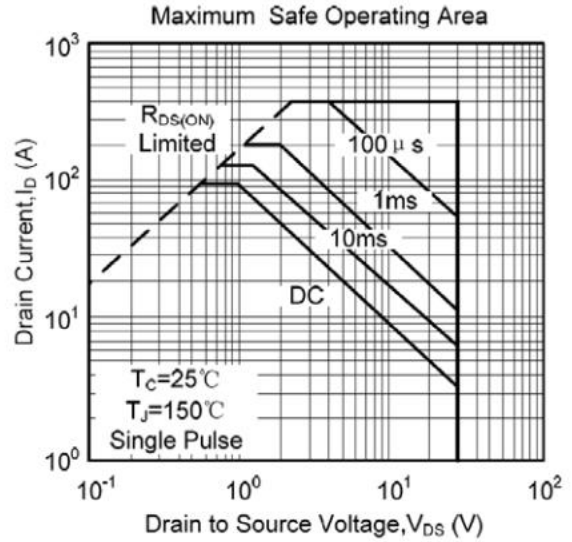
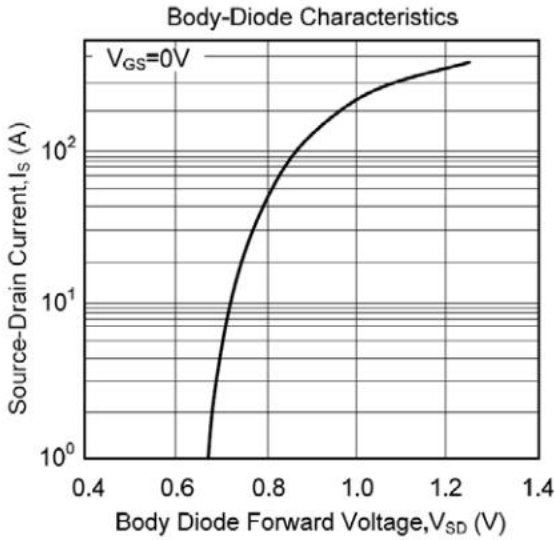
## 特性曲线





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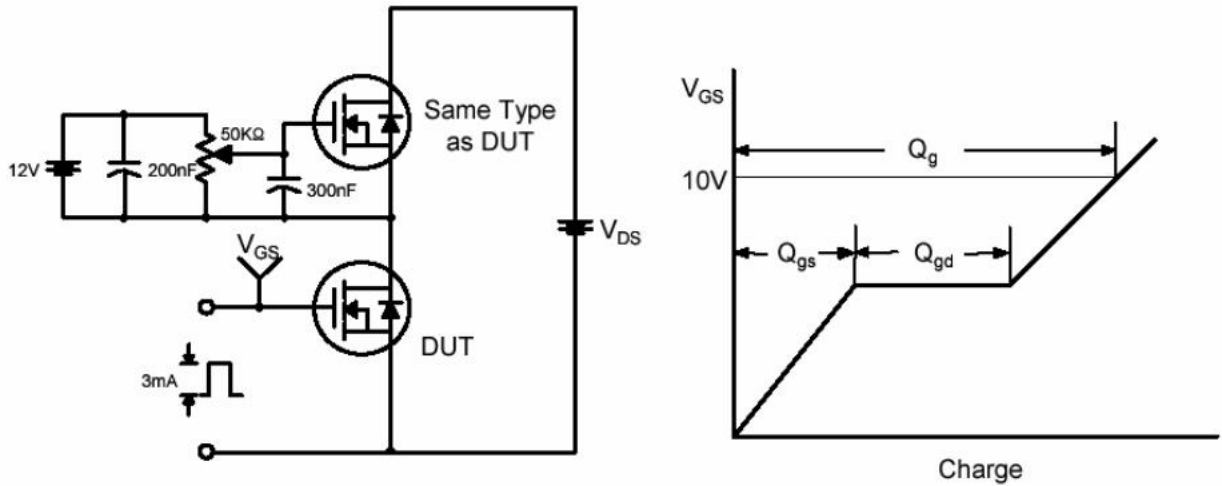




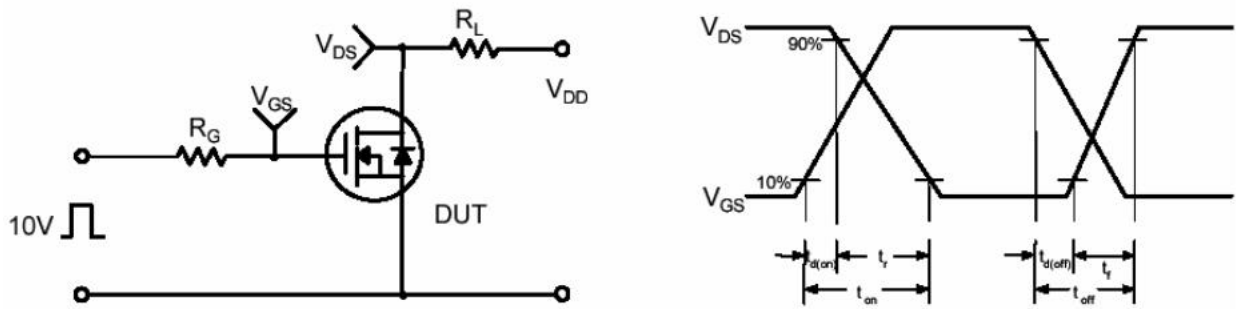
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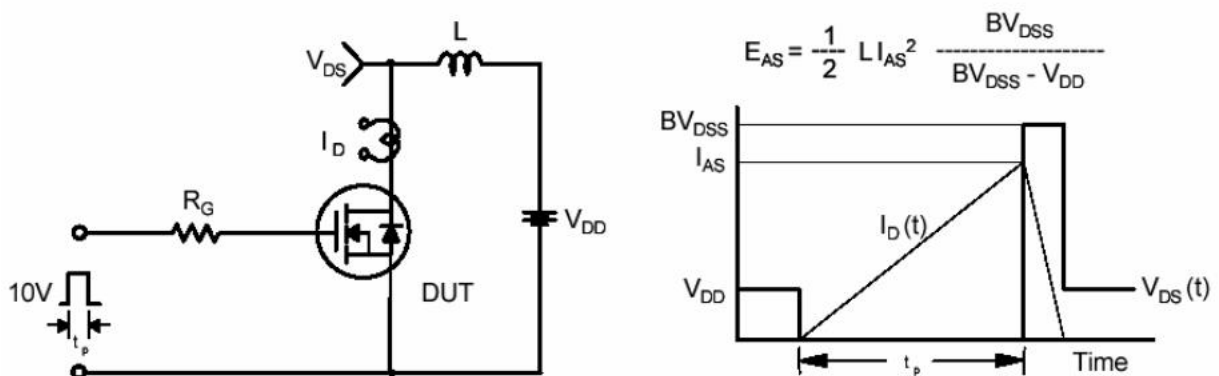
Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms



Unclamped Inductive Switching Test Circuit & Waveforms





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## ■ 特性曲线

Peak Diode Recovery dv/dt Test Circuit & Waveforms

