双 N 沟道 MOSFET

ELM56802WSA-S

■概要

ELM56802WSA-S 是 N 沟道低输入电容、低工作电压、低导通电阻的大电流 MOSFET，内藏有两个 MOSFET。

■特点

- Vds=30V
- Id=4.0A
- Rds(on) = 28mΩ (Vgs=10V)
- Rds(on) = 32mΩ (Vgs=4.5V)

■绝对最大额定值

如没有特别注明时, Ta=25℃

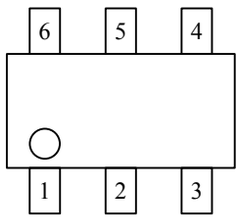
项目		记号	规格范围	单位
漏极 – 源极电压		Vds	30	V
栅极 – 源极电压		Vgs	± 20	V
漏极电流（定常）Tj=150℃	Ta=25℃	Id	4.0	A
	Ta=70℃		2.8	
漏极电流（脉冲）		Idm	18	A
容许功耗	Tc=25℃	Pd	2.0	W
	Tc=70℃		1.3	
动作结合部温度		Tj	150	℃
保存温度范围		Tstg	–55 ~ 150	℃

■热特性

项目	记号	典型值	最大值	单位
最大结合部 – 环境热阻	Rθja		120	℃/W

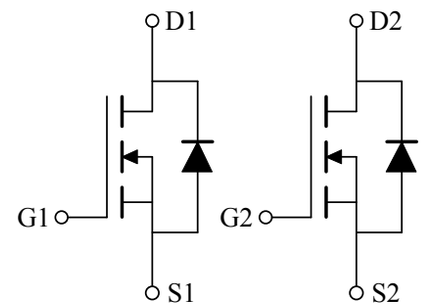
■引脚配置图

SOT-26(俯视图)



引脚编号	引脚名称
1	GATE1
2	SOURCE2
3	GATE2
4	DRAIN2
5	SOURCE1
6	DRAIN1

■电路图



如需确认语言的准确性，请参考 ELM 的英文版或日文版。

■电特性

如没有特别注明时, Ta=25℃

项目	记号	条件		最小值	典型值	最大值	单位
静态特性							
漏极 – 源极击穿电压	BVdss	Id=250μA, Vgs=0V		30			V
栅极接地时漏极电流	Idss	Vds=24V, Vgs=0V				1	μA
			Ta=85℃			30	
栅极漏电电流	Igss	Vds=0V, Vgs= ± 20V				± 100	nA
栅极阈值电压	Vgs(th)	Vds=Vgs, Id=250μA		1.0		2.0	V
导通时漏极电流	Id(on)	Vgs=10V, Vds≧4.5V		10			A
漏极 – 源极导通电阻	Rds(on)	Vgs=10V, Id=4.0A			20	28	mΩ
		Vgs=4.5V, Id=2.8A			24	32	
正向跨导	Gfs	Vds=4.5V, Id=2.5A			8		S
二极管正向压降	Vsd	Is=1.6A, Vgs=0V			0.8	1.2	V
寄生二极管最大连续电流	Is					1.7	A
动态特性							
输入电容	Ciss	Vgs=0V, Vds=15V, f=1MHz			320		pF
输出电容	Coss				70		pF
反馈电容	Crss				30		pF
开关特性							
总栅极电荷	Qg	Vgs=10V, Vds=15V, Id=2.6A			3.0	4.5	nC
栅极 – 源极电荷	Qgs				1.6		nC
栅极 – 漏极电荷	Qgd				0.6		nC
导通延迟时间	td(on)	Vgs=10V, Vds=15V, Id=1.0A RL=15Ω, Rgen=6Ω			8	12	ns
导通上升时间	tr				12	18	ns
关闭延迟时间	td(off)				15	30	ns
关闭下降时间	tf				8	15	ns

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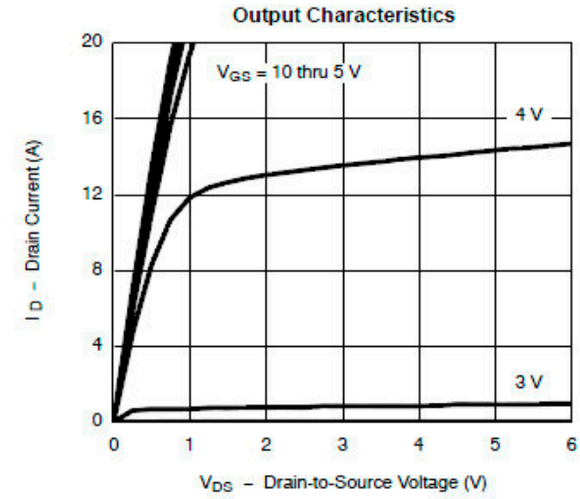
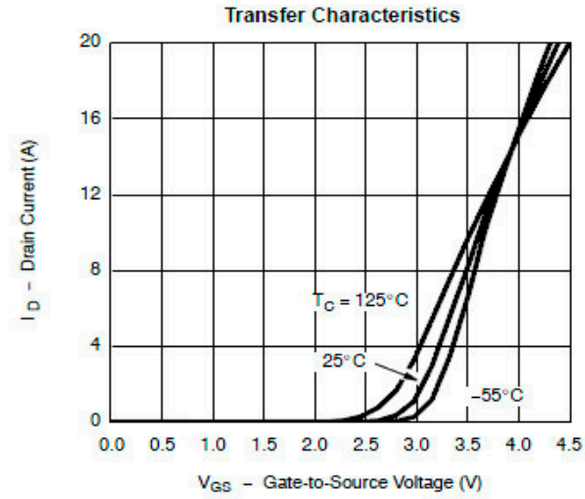
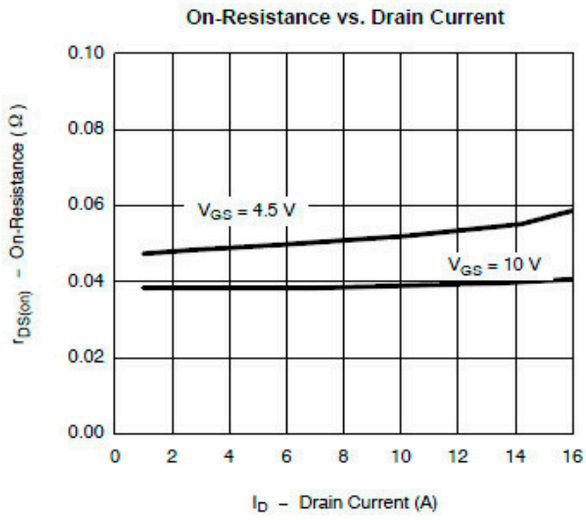
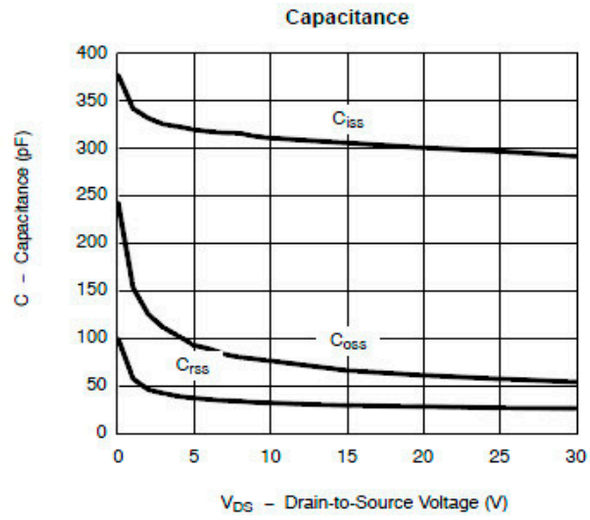
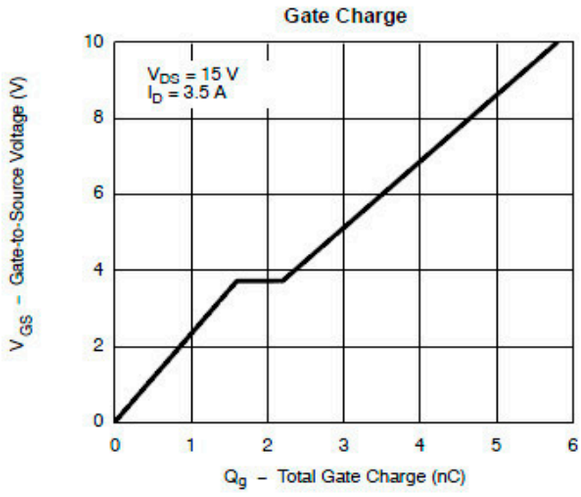
■标准特性和热特性曲线

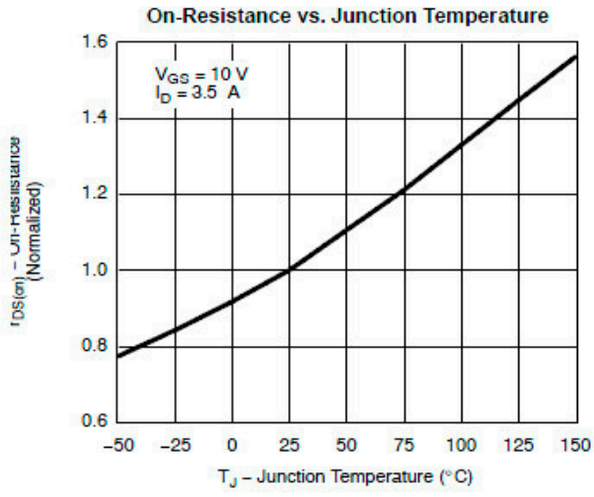












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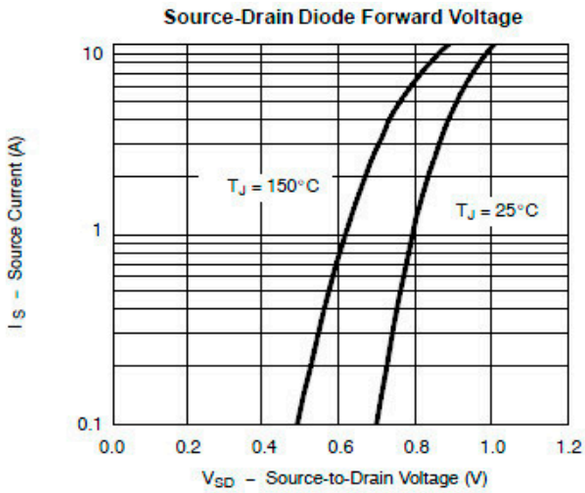

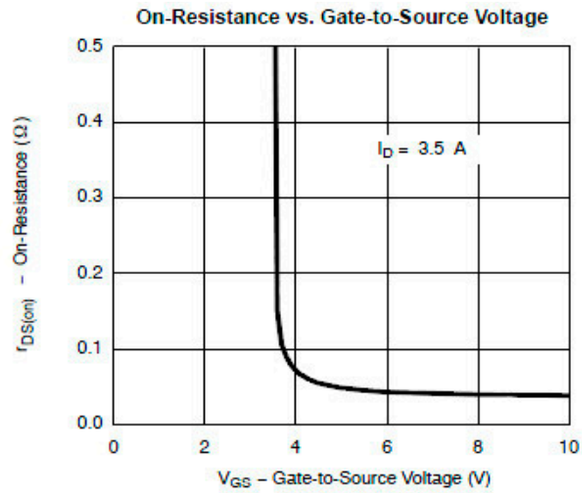

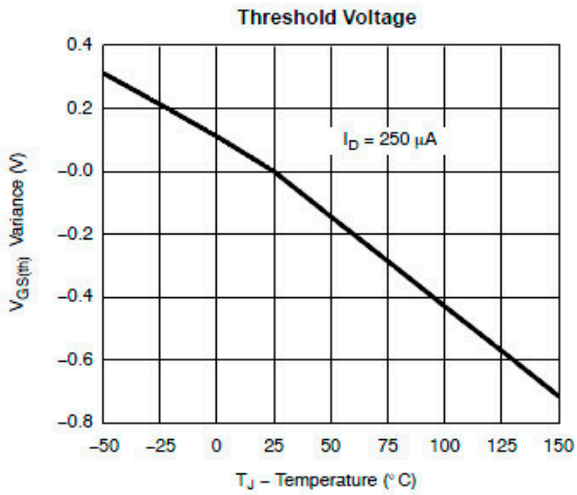

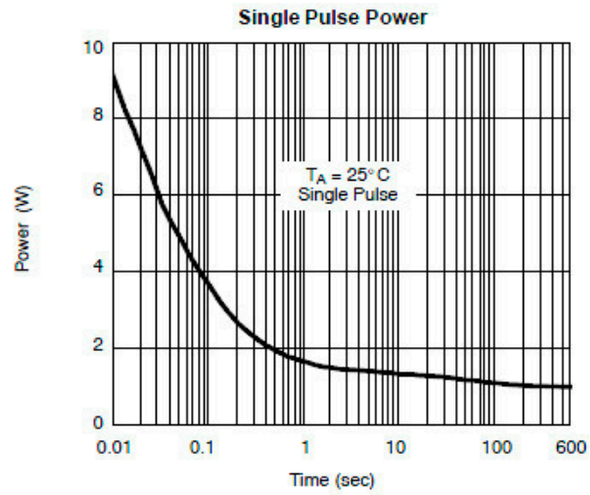

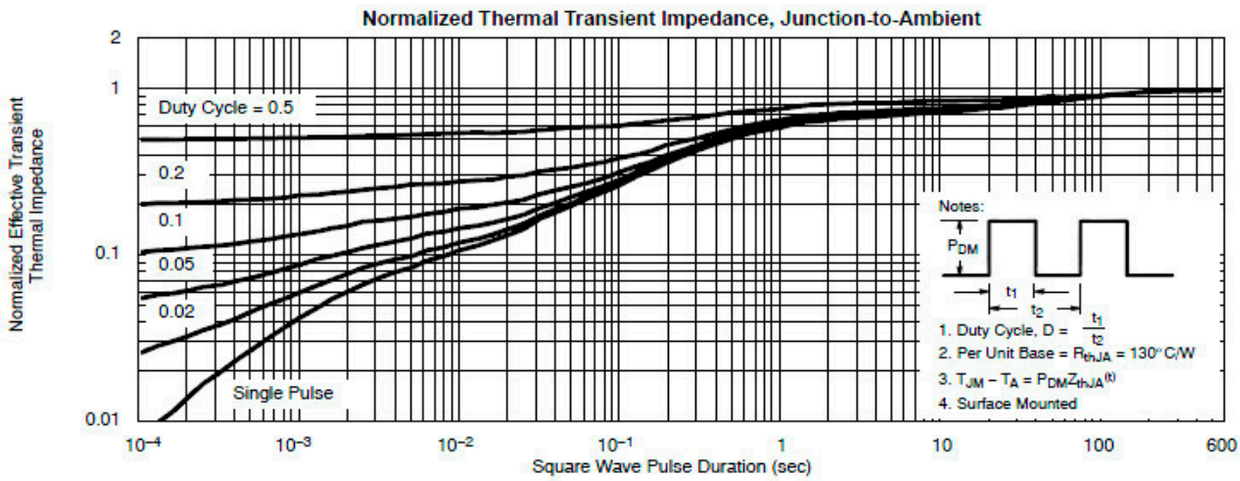

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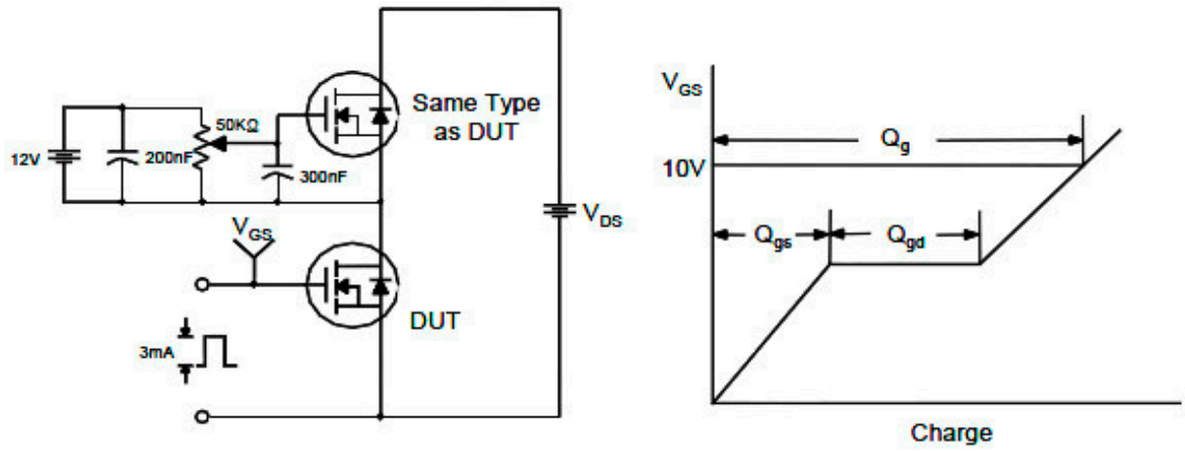
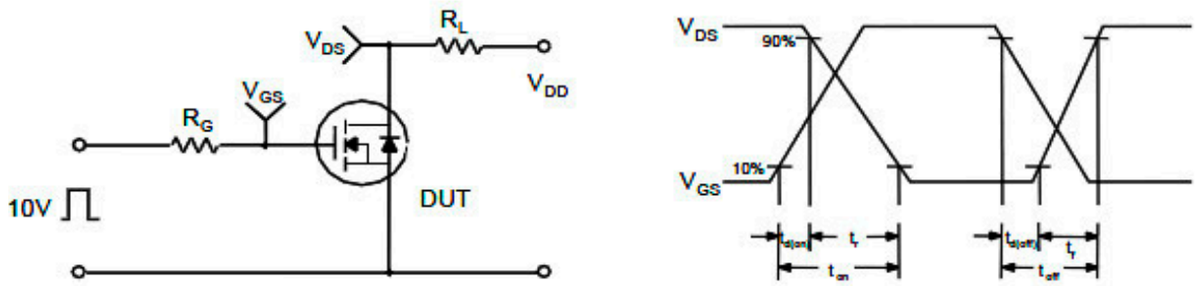
■测试电路和波形

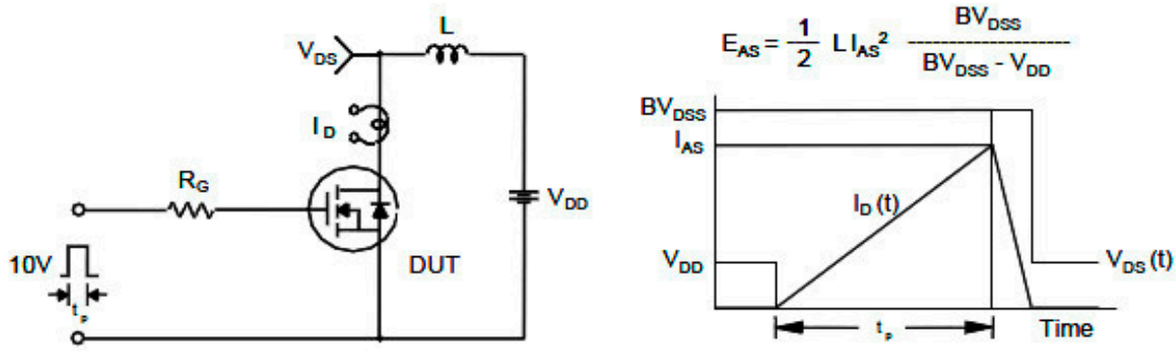
Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms



Unclamped Inductive Switching Test Circuit & Waveforms



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