



型号: SLS6800

30(VDS)±12 (VGS) 5.6A(ID) N-Channel Enhancement Mode MOSFET

主要特性/Features

N- Channel:30V 5.6A

$R_{DS(on)Typ} = 20m\Omega @ V_{GS} = 10V$

$R_{DS(on)Typ} = 22m\Omega @ V_{GS} = 4.5V$

Very Low On-resistance $R_{DS(ON)}$

Low C_{rss}

Fast switching

Improved dv/dt capability

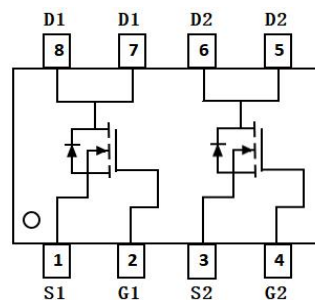
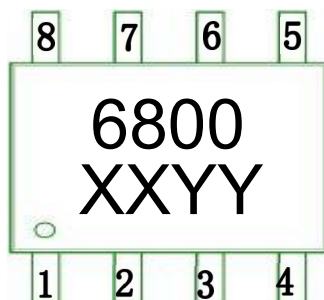
应用/Application

动力管理 **Power Management**

便携式设备 **Portable devices**

负载开关 **Load switch**

印字/MARKING 等效电路/Equivalent Circuit





极限参数/N-MOSFET Absolute Maximum Ratings(TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{DSS}	Drain-Source Voltage	30	V
I _D	Drain Current - Continuous (T _C = 25°C) - Continuous (T _C = 70°C)	5.6	A
		4.5	A
I _{DM}	Drain Current - Pulsed (Note 1)	23	A
V _{GSS}	Gate-Source Voltage	± 12	V
P _D	Power Dissipation (T _C = 25°C)	1.2	W
R _{θJA}	Thermal Resistance, Junction-to-Ambient	104	°C/W
T _J , T _{STG}	Operating and Storage Temperature Range	-55 to +150	°C
T _L	Maximum lead temperature for soldering purposes, 1/8" from case for 5 seconds	300	°C

* Drain current limited by maximum junction temperature.

电性能参数/ N-MOSFET Electrical Characteristics (TA=25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0 V, I _D = 250 μA	30	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 30 V, V _{GS} = 0 V	--	--	1	μA
		V _{DS} = 24 V, T _C = 125°C	--	--	10	μA
I _{GSSF}	Gate-Body Leakage Current, Forward	V _{GS} = 12 V, V _{DS} = 0 V	--	--	100	nA
I _{GSSR}	Gate-Body Leakage Current, Reverse	V _{GS} = -12 V, V _{DS} = 0 V	--	--	-100	nA
On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D = 250 μA	0.6	0.8	1.4	V
R _{DS(on)}	Static Drain-Source	V _{GS} = 10 V, I _D = 5.6 A	--	20	25	mΩ
		V _{GS} = 5 V, I _D = 3 A	-	21	31	
	On-Resistance	V _{GS} = 4.5 V, I _D = 2.5 A		22	45	



Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} = 15 V, V _{GS} = 0 V,	--	635	-	pF
C _{oss}	Output Capacitance	f = 1.0 MHz	--	56	-	pF
C _{rss}	Reverse Transfer Capacitance		--	46	-	pF
Switching Characteristics						
t _{d(on)}	Turn-On Delay Time		--	12	--	ns
t _r	Turn-On Rise Time	V _{GS} = 10 V, V _{DS} = 15 V,	--	52	--	ns
t _{d(off)}	Turn-Off Delay Time	R _G = 6 Ω, R _L = 2.7 Ω	--	17	--	ns
t _f	Turn-Off Fall Time		--	10	--	ns
Q _g	Total Gate Charge	V _{DS} = 15 V, I _D = 5.6A,	--	5.2	--	nC
Q _{gs}	Gate-Source Charge	V _{GS} = 10V	--	1.2	--	nC
Q _{gd}	Gate-Drain Charge		--	1.7	--	nC
Drain-Source Diode Characteristics and Maximum Ratings						
I _S	Maximum Continuous Drain-Source Diode Forward Current		--	--	5.6	A
I _{SM}	Maximum Pulsed Drain-Source Diode Forward Current		--	--	23	A
V _{SD}	Drain to Source Diode Forward Voltage, V _{GS} = 0V, I _{SD} = 5.6A, T _J = 25°C		--	--	1.2	V

Notes:

- 1 . Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
- 2 . Device mounted on FR-4 PCB, 1inch x 0 .85inch x 0 .062 inch
3. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 0.5%



典型特征 / Typical Characteristics

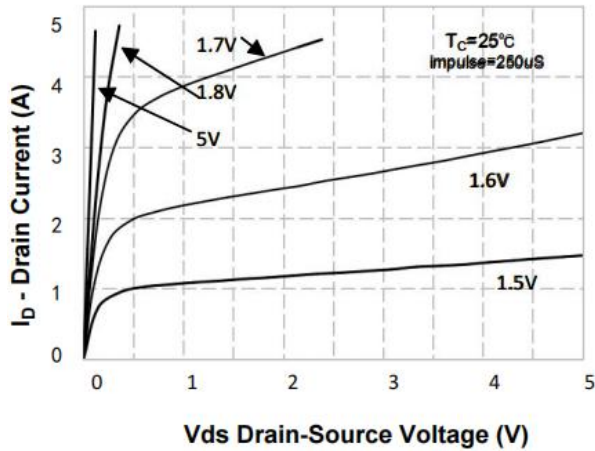


Figure 1. On-Region Characteristics

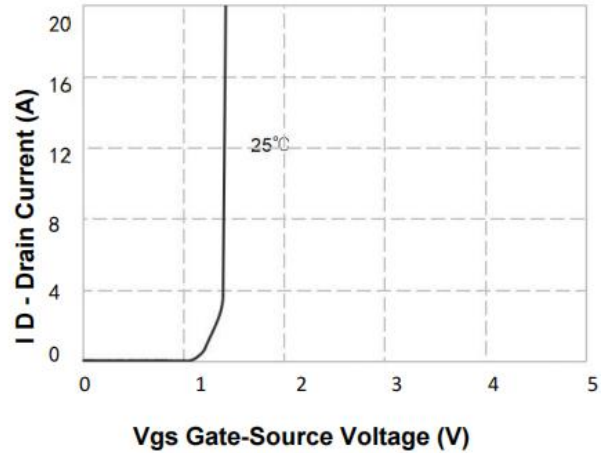


Figure 2. Transfer Characteristics

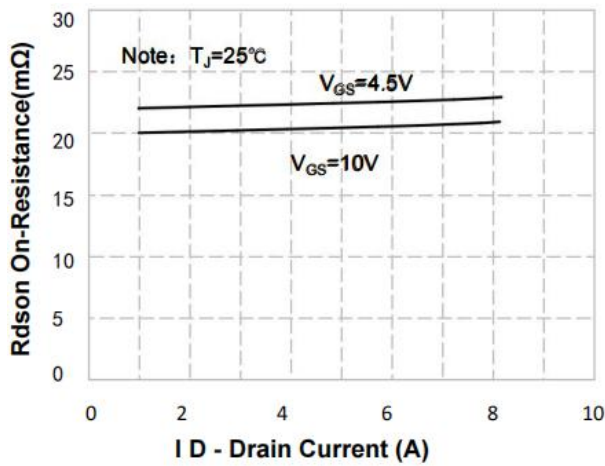


Figure 3. On-Resistance Variation vs Drain Current and Gate Voltage

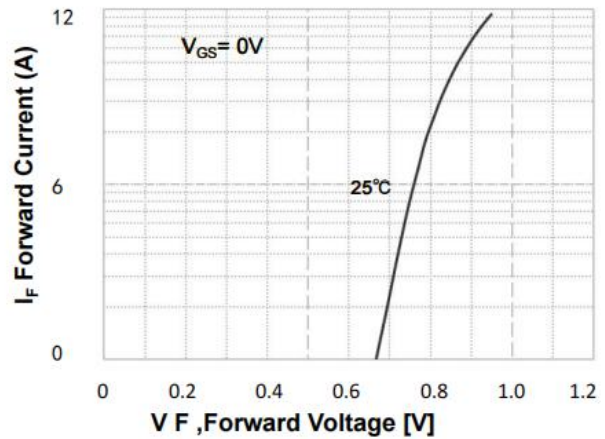


Figure 4. Body Diode Forward Voltage Variation with Source Current and Temperature

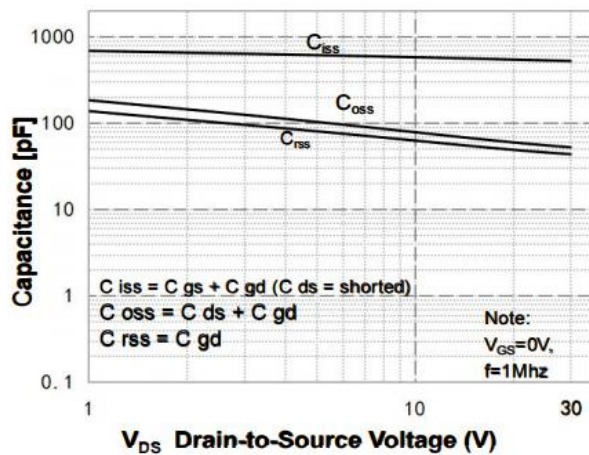


Figure 5. Capacitance Characteristics

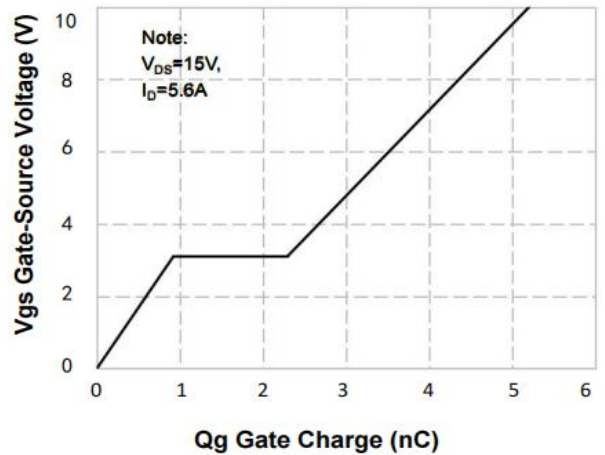


Figure 6. Gate Charge Characteristics

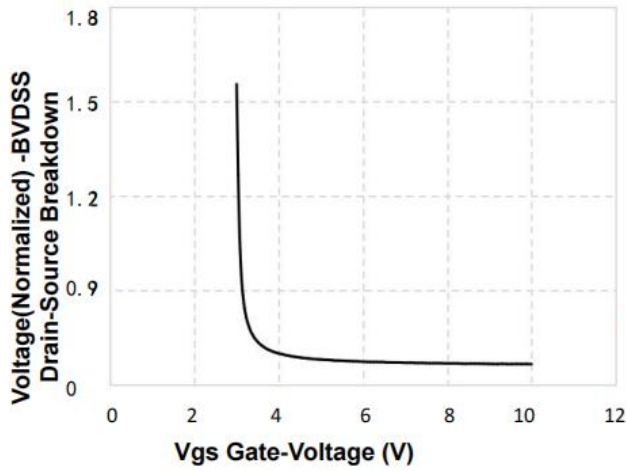


Figure 7. Breakdown Voltage Variation vs Gate-Voltage

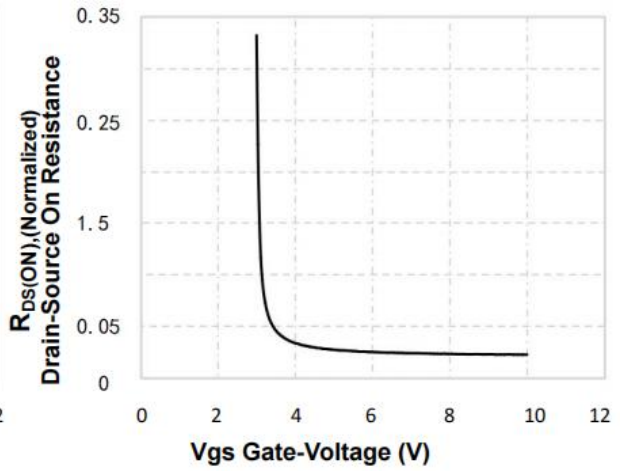


Figure 8. On-Resistance Variation vs Gate Voltage

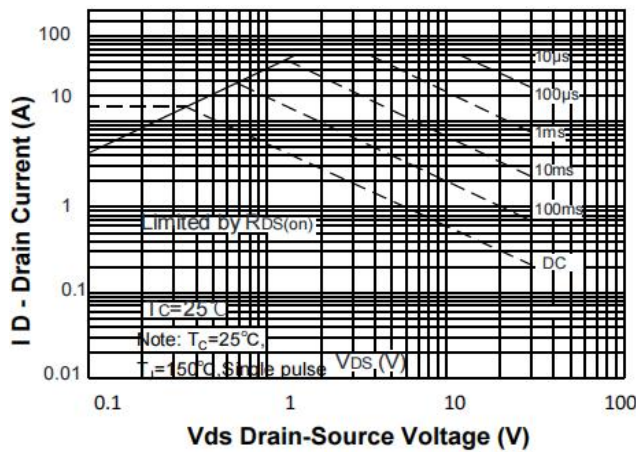


Figure 9. Maximum Safe Operating Area

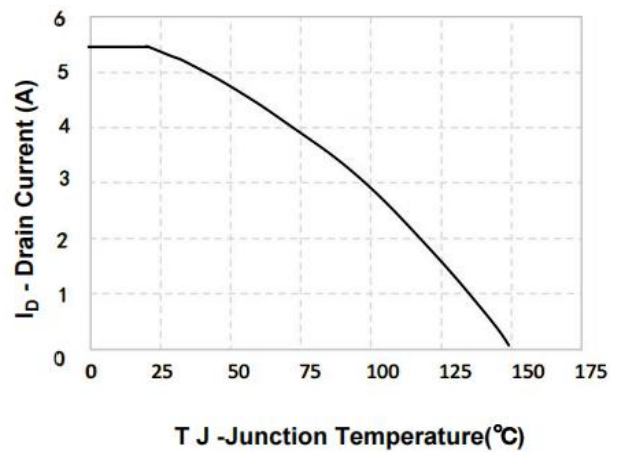


Figure 10. Maximum PContinuous Drain Current vs Case Temperature

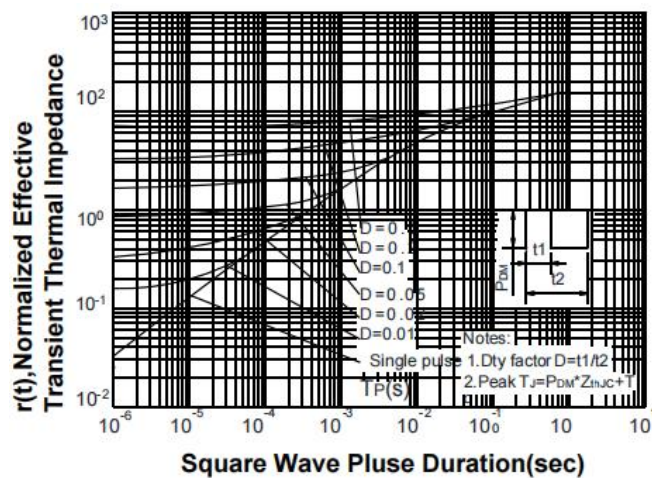
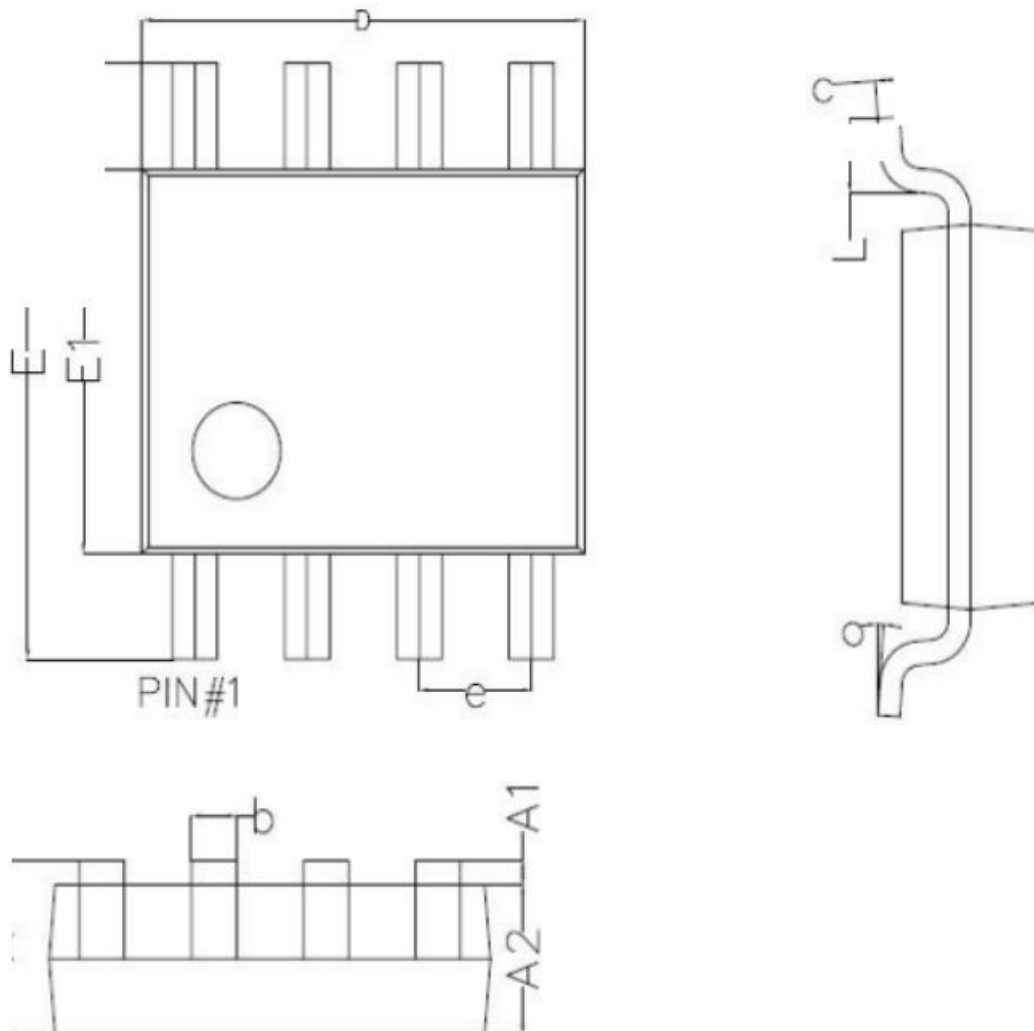


Figure 11. Transient Thermal Response Curve



成品外观尺寸/SOP8 Package Information



Symbol	Dim in mm		
	Min	Nor	Max
A	1.35	1.55	1.75
A1	0.02	0.065	0.10
A2	1.35	1.45	1.55
b	0.33	0.42	0.51
c	0.17	0.21	0.25
D	4.80	4.90	5.00
e	1.270 (BSC)		
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
L	0.4	0.835	1.27
θ	0°	4°	8°