SSC8LA0GS1

N-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
100V	±20V	9.5mR@10V	12A
		13.5mR@4V5	

➢ Description

This device uses advanced trench technology to provide excellent RDSON and low gate charge. This device is suitable for use as a load switch or in PWM applications.

➢ Applications

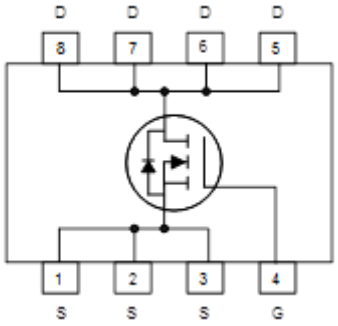
- Load Switch
- Industrial and motor drive applications
- DCDC conversion and ACDC converters

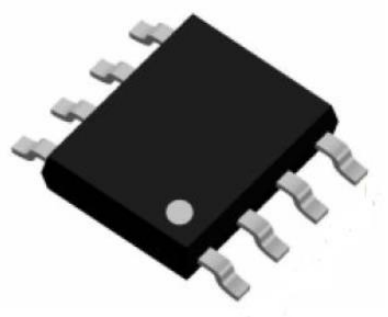
➢ Ordering Information

Device	Package	Shipping
SSC8LA0GS1	SOP8	2500/Reel

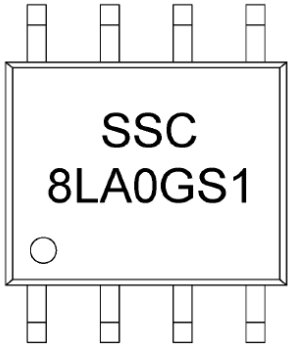
➢ Pin configuration

Top view





SOP8



Marking

➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	100	V
V_{GSS}	Gate-to-Source Voltage	±20	V
I_D	Continuous Drain Current [a]	12	A
I_{DM}	Pulsed Drain Current [b]	76	A
P_D	Power Dissipation [c]	7.5	W
P_{DSM}	Power Dissipation [a]	3	W
T_J	Operation junction temperature	-55 to 150	℃
T_{STG}	Storage temperature range	-55 to 150	℃

➢ Thermal Resistance Ratings(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Typical	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]		45	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		20	

Note:

a. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in^2 FR-4 board with 2oz.copper,in a still air environment with T_A=25℃.The value in any given application depends on the user is specific board design. The current rating is based on the t≤ 10s thermal resistance rating.

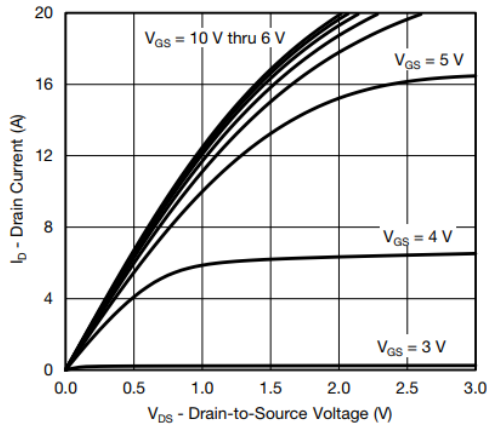
b. Repetitive rating, pulse width limited by junction temperature.

c. The power dissipation P_D is based on $T_{J(MAX)}$=150°C, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.

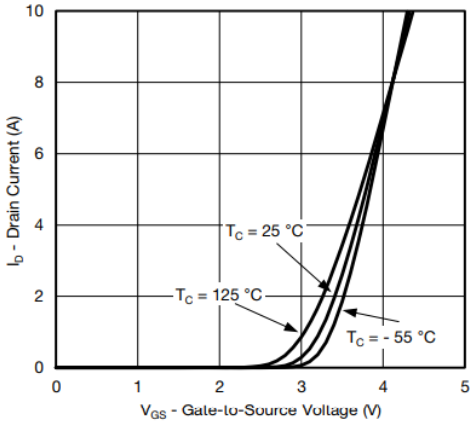
➢ Electronics Characteristics(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V,ID=250uA	100			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS,ID=250uA	1	1.2	2.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=10V,ID=11.5A		9.5	12	mR
		VGS=4.5V,ID=10A		13.5	15	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=100V,VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±20V,VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=25V,ID=10A		46		S
V_{SD}	Forward Voltage	VGS=0V,IS=6A		0.8	1.5	V
Ciss	Input Capacitance	VDS=25V, VGS=0V, f=1MHZ		2400		pF
Coss	Output Capacitance			186		
Crss	Reverse Transfer Capacitance			15		
Q_G	Total Gate Charge	VGS=10V, VDS=20V, ID=12A		46		nC
Q_{GS}	Gate Source Charge			8		
Q_{GD}	Gate Drain Charge			12		
$T_{D(ON)}$	Turn-on delay time	VGS=10V, VDS=30V, RG=3R, RL=30R		20		ns
Tr	Rise Time			10		
$T_{D(OFF)}$	Turn-off delay time			30		
Tf	Fall Time			12		

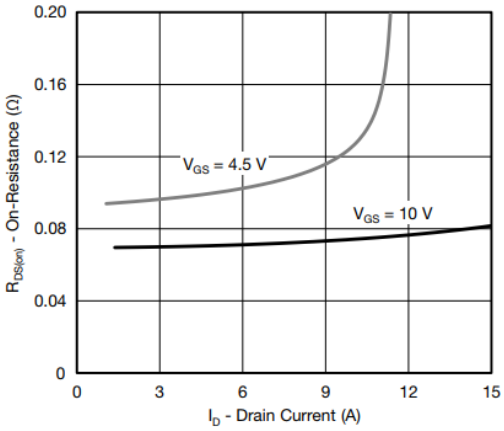
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



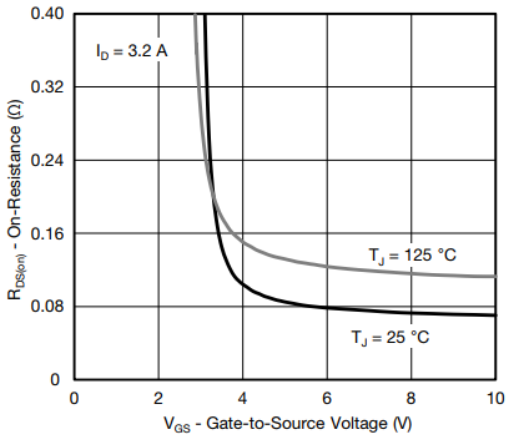
Output Characteristics



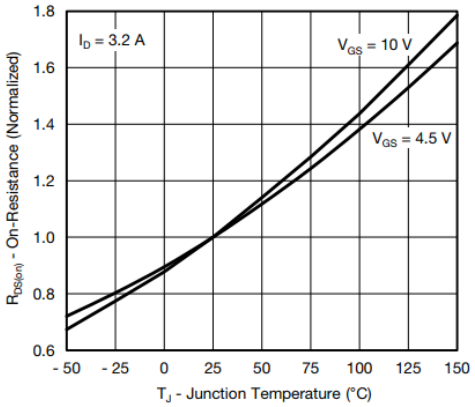
Transfer Characteristics



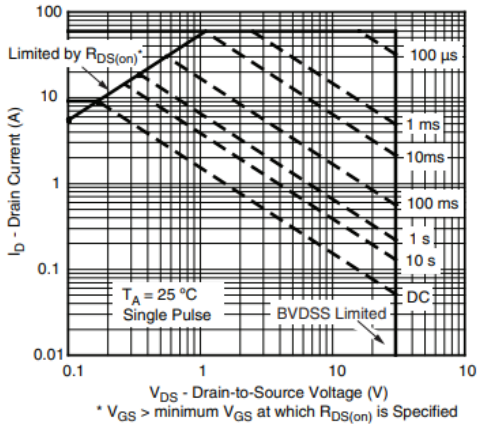
On-Resistance vs. Drain Current and Gate Voltage



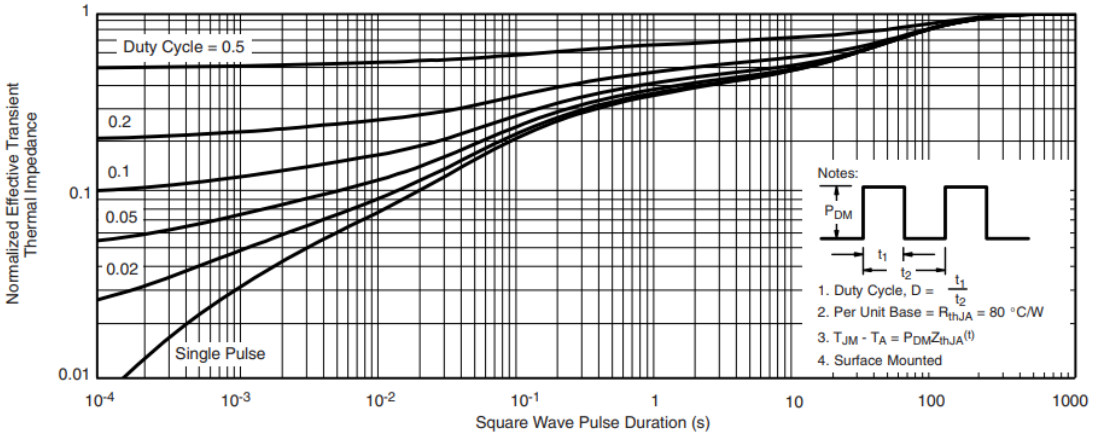
On-Resistance vs. Gate-to-Source Voltage



On-Resistance vs. Junction Temperature



Safe Operating Area, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Ambient

➢ Package Information