



SSC8L32GN4

N-Channel Enhancement Mode MOSFET

➤ Features

VDS	VGS	RDSON Typ.	ID
30V	±20V	2.6mR@10V	80A
		3.6mR@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.

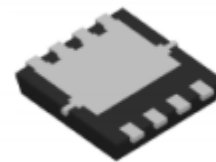
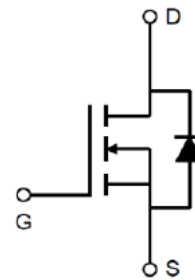
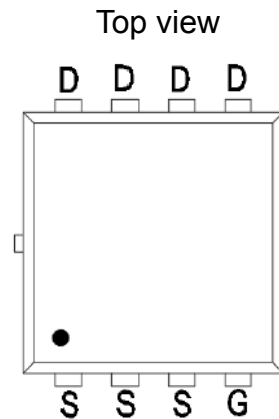
➤ Applications

- Load Switch
- Portable Devices
- DCDC conversion

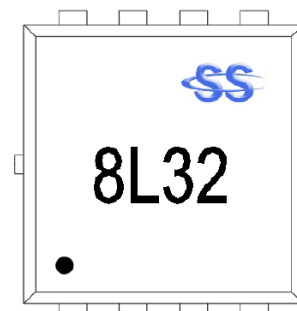
➤ Ordering Information

Device	Package	Shipping
SSC8L32GN4	PDFN3.3X3.3	5000/Reel

➤ Pin configuration



Bottom View



Marking

**➤ Absolute Maximum Ratings**($T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Ratings	Unit	
V_{DSS}	Drain-to-Source Voltage	30	V	
V_{GSS}	Gate-to-Source Voltage	± 20	V	
I_D	Continuous Drain Current ^d	$T_C=25^\circ\text{C}$	80	A
		$T_C=100^\circ\text{C}$	72	
I_{DSM}	Continuous Drain Current ^a	$T_A=25^\circ\text{C}$	66	A
		$T_A=70^\circ\text{C}$	59	
I_{DM}	Pulsed Drain Current ^b	120	A	
P_D	Power Dissipation ^c	$T_C=25^\circ\text{C}$	60	W
		$T_C=100^\circ\text{C}$	28	
P_{DSM}	Power Dissipation ^a	$T_A=25^\circ\text{C}$	4.25	W
		$T_A=70^\circ\text{C}$	3.4	
I_{AS}	Avalanche Current ^b	125	A	
E_{AS}	Avalanche Energy ^b L=0.05mH	45	mJ	
T_J	Operation junction temperature	-55~150	$^\circ\text{C}$	
T_{STG}	Storage temperature range	-55~150		
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance ^a	70	$^\circ\text{C/W}$	
$R_{\theta JC}$	Junction-to-Case Thermal Resistance	10		

Note:

- The value of $R_{\theta JA}$ is measured with the device mounted on 1 in² FR-4 board with 2oz.copper,in a still air environment with $T_A=25^\circ\text{C}$.The value in any given application depends on the user is specific board design. The current rating is based on the $t \leq 10\text{s}$ thermal resistance rating.
- Repetitive rating, pulse width limited by junction temperature.
- The power dissipation P_D is based on $T_{J(MAX)}=150^\circ\text{C}$, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.
- The maximum current rating is packed limited.

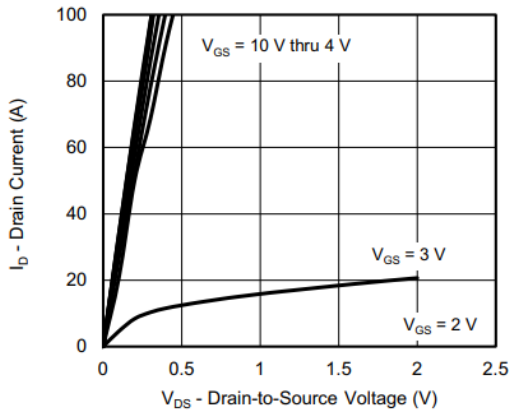


➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

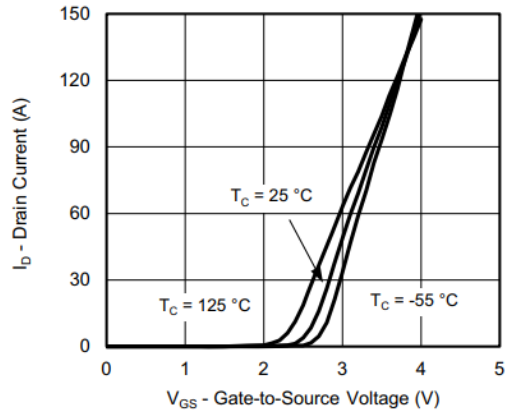
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
V(BR)DSS	Drain-Source Breakdown Voltage	VGS=0V, ID=250uA	30			V
VGS (th)	Gate Threshold Voltage	VDS=VGS, ID=250uA	1	1.5	2.2	V
RDS(on)	Drain-Source On- Resistance	VGS=10V, ID=20A		2.6	3.8	mR
		VGS=4.5V, ID=10A		3.6	5	
IDSS	Zero Gate Voltage Drain Current	VDS=30V, VGS=0V			1	uA
IGSS	Gate-Source leak current	VGS=±20V, VDS=0V			±100	nA
VSD	Forward Voltage	VGS=0V, IS=1A			1.1	V
Ciss	Input Capacitance	VDS=20V, VGS=0V, f=1MHZ		2560		pF
Coss	Output Capacitance			560		
Crss	Reverse Transfer Capacitance			130		
Qg	Total Gate Charge	VDS=15V , ID=20A , VGS=4.5V		29		nC
Qgs	Gate to source charge			6		
Qgd	Gate to drain charge			5		
TD(ON)	Turn-on delay time	VGEN=10V, VDS=15V, RL=15R, RG=3R, ID=1A		15		ns
Tr	Rise time			5		
TD(OFF)	Turn-off delay time			35		
Tf	Fall time			10		



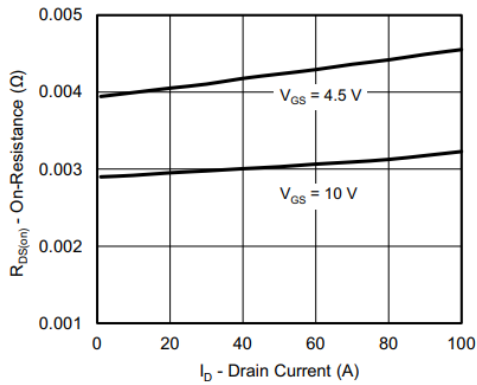
➤ **Typical Characteristics** ($T_A=25^\circ\text{C}$ unless otherwise noted)



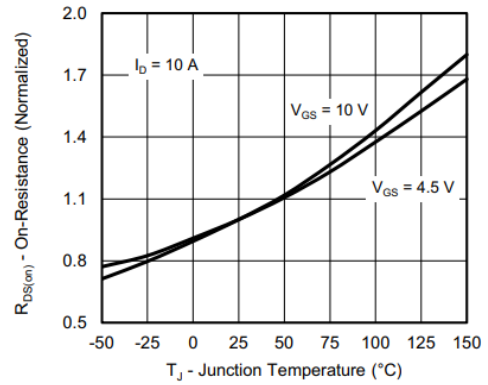
Output Characteristics



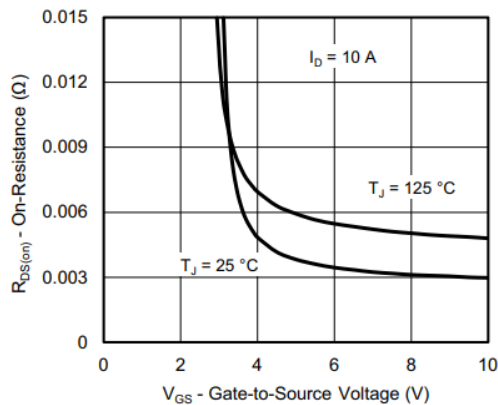
Transfer Characteristics



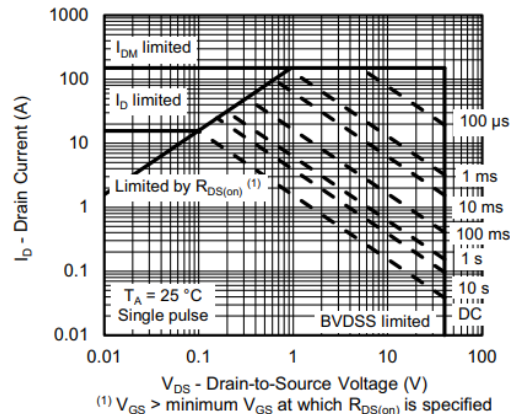
On-Resistance vs. Drain Current and Gate Voltage



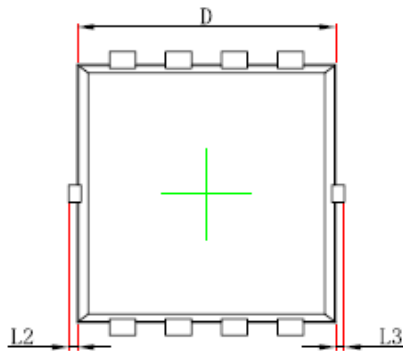
On-Resistance vs. Junction Temperature



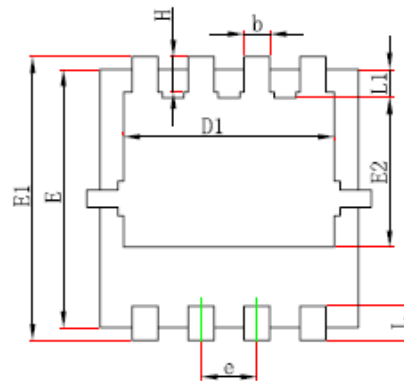
On-Resistance vs. Gate-to-Source Voltage



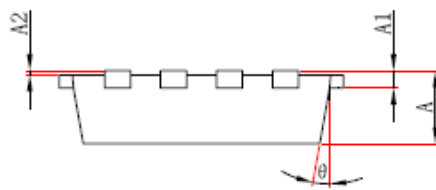
Safe Operating Area, Junction-to-Ambient

➤ Package Information


Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Package : PDNF3.3X3.3-8L

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.650	0.850	0.026	0.033
A1	0.152 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	2.900	3.100	0.114	0.122
D1	2.300	2.600	0.091	0.102
E	2.900	3.100	0.114	0.122
E1	3.150	3.450	0.124	0.136
E2	1.535	1.935	0.060	0.076
b	0.200	0.400	0.008	0.016
e	0.550	0.750	0.022	0.030
L	0.300	0.500	0.012	0.020
L1	0.180	0.480	0.007	0.019
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.315	0.515	0.012	0.020
θ	9°	13°	9°	13°



DISCLAIMER

AFSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. AFSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G. OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.