



## SSC8L30GN4

### N-Channel Enhancement Mode MOSFET

#### ➤ Features

VDS	VGS	RDSON Typ.	ID
30V	±20V	4.5mR@10V	60A
		6.4mR@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.

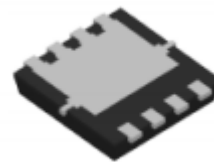
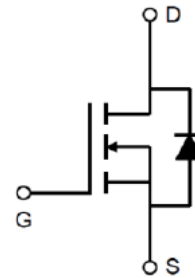
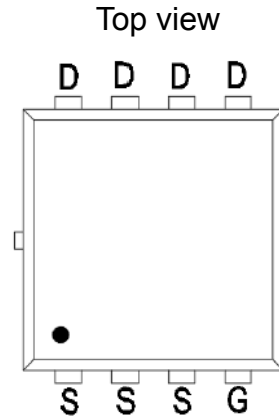
#### ➤ Applications

- Load Switch
- Portable Devices
- DCDC conversion

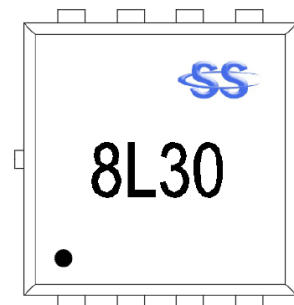
#### ➤ Ordering Information

Device	Package	Shipping
SSC8L30GN4	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	$\pm 20$	V	
$I_D$	Continuous Drain Current <sup>d</sup>	$T_C=25^\circ\text{C}$	60	A
		$T_C=100^\circ\text{C}$	50	
$I_{DSM}$	Continuous Drain Current <sup>a</sup>	$T_A=25^\circ\text{C}$	46	A
		$T_A=70^\circ\text{C}$	38	
$I_{DM}$	Pulsed Drain Current <sup>b</sup>	90	A	
$P_D$	Power Dissipation <sup>c</sup>	$T_C=25^\circ\text{C}$	40	W
		$T_C=100^\circ\text{C}$	18	
$P_{DSM}$	Power Dissipation <sup>a</sup>	$T_A=25^\circ\text{C}$	3.5	W
		$T_A=70^\circ\text{C}$	2.7	
$I_{AS}$	Avalanche Current <sup>b</sup>	66	A	
$E_{AS}$	Avalanche Energy <sup>b</sup> L=0.05mH	25	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 <sup>a</sup>	75	$^\circ\text{C/W}$	
$R_{\theta JC}$	Junction-to-Case Thermal Resistance	12		

**Note:**

- The value of  $R_{\theta JA}$  is measured with the device mounted on 1 in<sup>2</sup> 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.

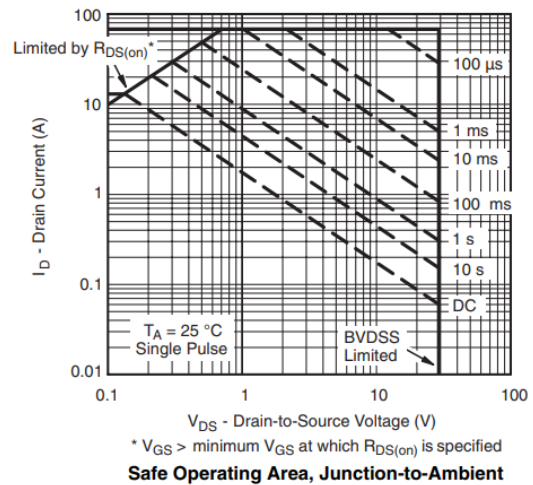
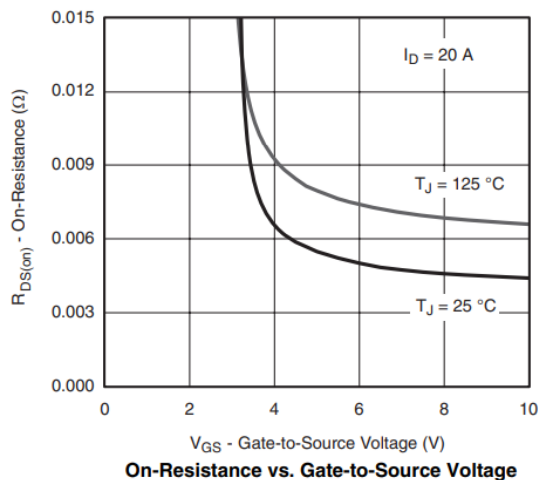
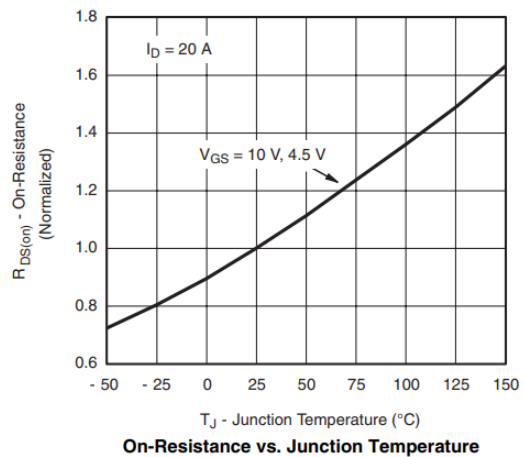
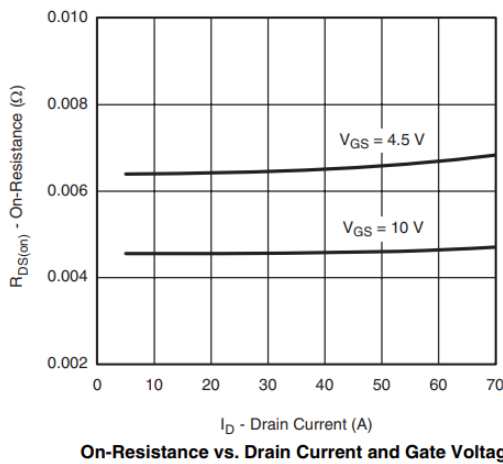
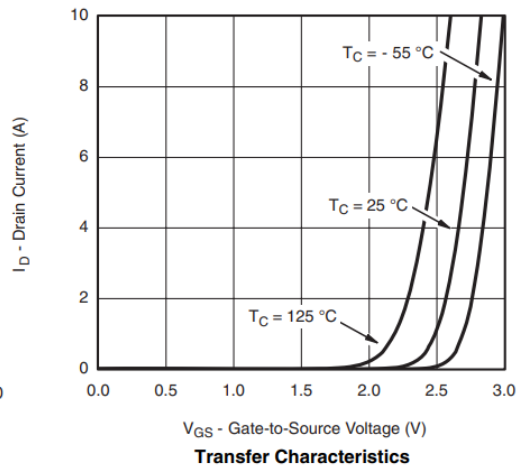
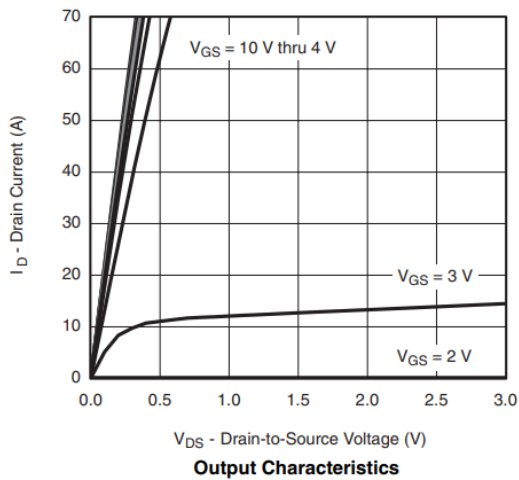


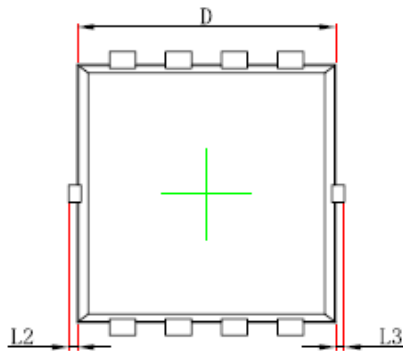
➤ **Electronics Characteristics**( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

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		4.5	5	mR
		VGS=4.5V, ID=10A		6.4	8	
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		1465		pF
Coss	Output Capacitance			520		
Crss	Reverse Transfer Capacitance			120		
Qg	Gate Charge total	VDS=15V , ID=20A , VGS=10V		18.1		nC
Qgs	Gate to source charge			3.5		
Qgd	Gate to drain charge			3.2		
TD(ON)	Turn-on delay time	VGEN=10V, VDS=15V, RL=15R, RG=3R, ID=1A		7		ns
Tr	Rise time			2.8		
TD(OFF)	Turn-off delay time			22		
Tf	Fall time			5.4		

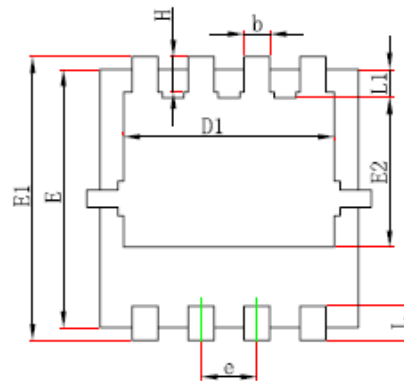


➤ **Typical Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

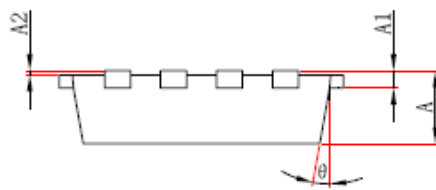


**➤ Package Information**


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°



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