SSC8232GN6

N-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
30V	±20V	8.5mR@10V	60A
		12mR@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

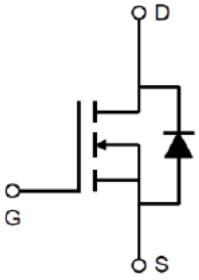
- Load Switch
- Portable Devices
- DCDC conversion

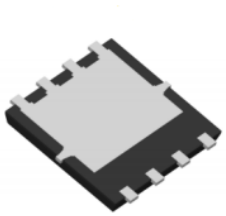
➢ Ordering Information

Device	Package	Shipping
SSC8232GN6	PDFN5x6	5000/Reel

➢ Pin configuration

Top view





Bottom View

(XX: year/YY: week)

Marking

➢ Absolute Maximum Ratings(T_A=25℃ 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	TC=25C°	60	A
		TC=100C°	37	A
I_{DSM}	Continuous Drain Current [a]	TA=25C°	14	A
		TA=70C°	10	A
I_{DM}	Pulsed Drain Current [b]		105	A
E_{AS}	Avalanche Energy, L=0.05mH		46	mJ
P_D	Power Dissipation [c]	TC=25C°	49	W
		TC=100C°	20	W
P_{DSM}	Power Dissipation [a]	TA=25C°	4	W
		TA=70C°	2.6	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]		35	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		3	

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=25C°.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.

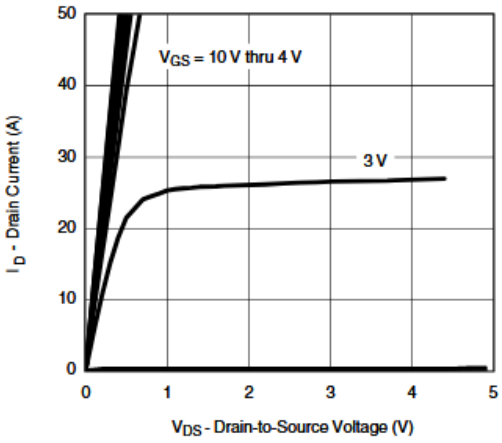
b. Repetitive rating, pulse width limited by junction temperature.

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.

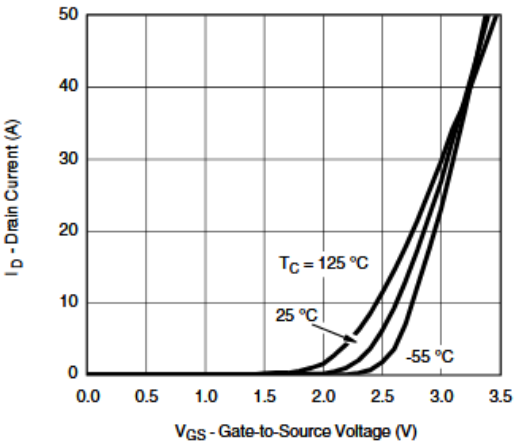
➢ Electronics Characteristics(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V,ID=250uA	30			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS,ID=250uA	1.2	1.8	2.8	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=10V,ID=24A		8.5	11	mR
		VGS=4.5V,ID=20A		12	15	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=30V,VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±20V,VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=15V,ID=15A		37		S
V_{SD}	Forward Voltage	VGS=0V,IS=1A			1.3	V
Ciss	Input Capacitance	VDS=15V, VGS=0V, f=1MHz		1115		pF
Coss	Output Capacitance			169		
Crss	Reverse Transfer Capacitance			99		
$T_{D(ON)}$	Turn-on delay time	VGEN=10V, VDS=15V, RL=1.5R, RG=1R,ID=10A		8		ns
Tr	Rise Time			11		
$T_{D(OFF)}$	Turn-off delay time			17		
Tf	Fall Time			9		
Q_G	Total Gate Charge	VGS=10V, VDS=20V, ID=12A		10		nC
Q_{GS}	Gate Source Charge			3.8		
Q_{GD}	Gate Drain Charge			2.1		

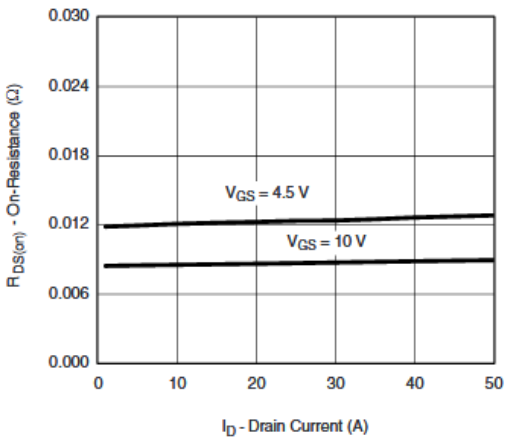
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



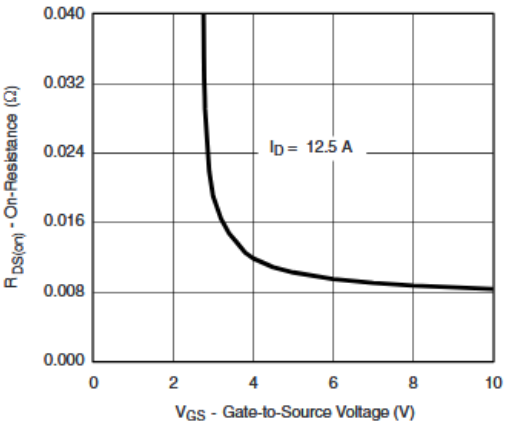
Output Characteristics



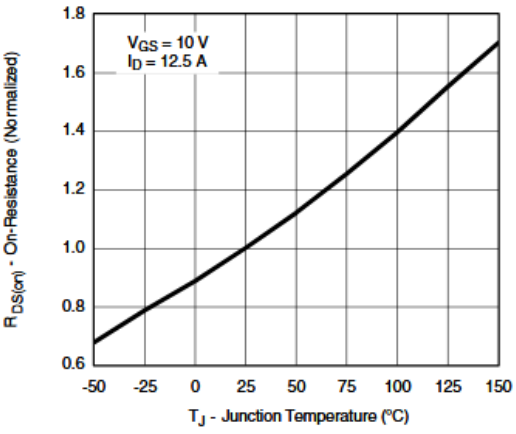
Transfer Characteristics



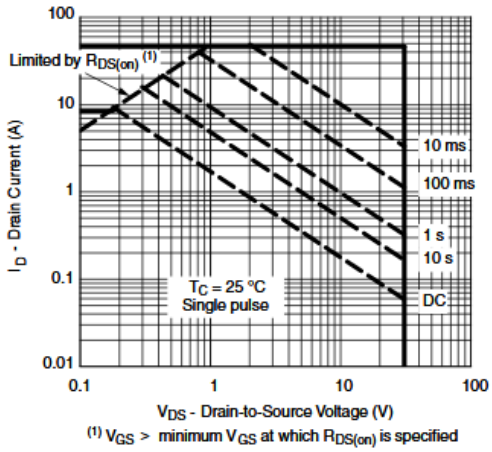
On-Resistance vs. Drain Current



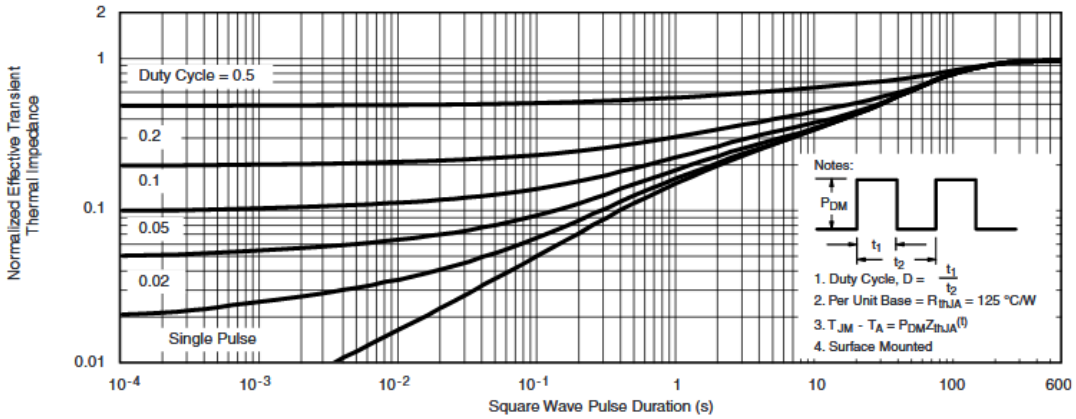
On-Resistance vs. Gate-to-Source Voltage



On-Resistance vs. Junction Temperature

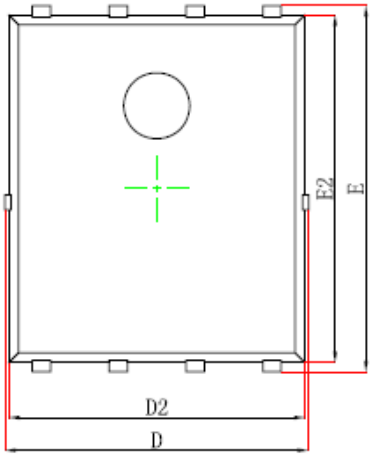


Safe Operating Area, Junction-to-Case

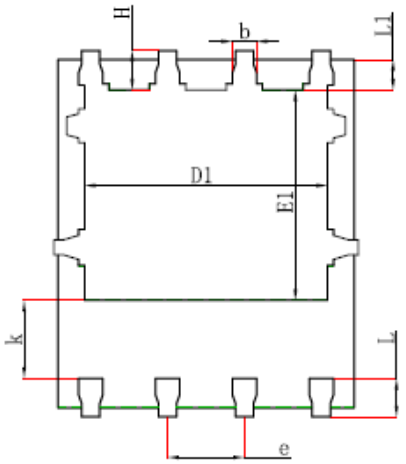


Normalized Thermal Transient Impedance, Junction-to-Ambient

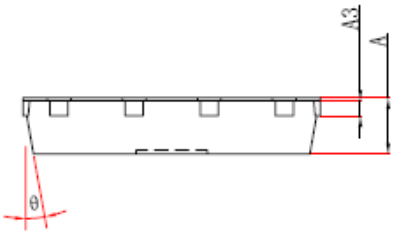
➢ Package Information



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Package：PDNF5X6-8L

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.000	0.035	0.039
A3	0.254REF		0.010REF	
D	4.944	5.096	0.195	0.201
E	5.974	6.126	0.235	0.241
D1	3.910	4.110	0.154	0.162
E1	3.375	3.575	0.133	0.141
D2	4.824	4.976	0.190	0.196
E2	5.674	5.826	0.223	0.229
k	1.190	1.390	0.047	0.055
b	0.350	0.450	0.014	0.018
e	1.270TYP		0.050TYP	
L	0.559	0.711	0.022	0.028
L1	0.424	0.576	0.017	0.023
H	0.574	0.726	0.023	0.029
θ	10°	12°	10°	12°

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