SSC8322GN2

Dual N-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
20V	±12V	40mR@4V5	4.4A
		50mR@2V5	

➢ Description

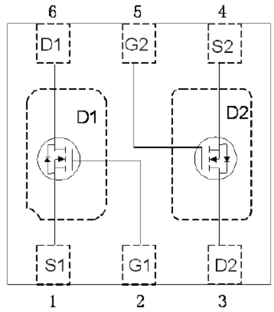
SSC8322GN2 combines 2 N-Channel enhancement mode power MOSFETs which are produced with high cell density and DMOS trench technology. This device particularly suits low voltage applications, especially for battery powered circuits, the tiny and thin outline saves PCB consumption

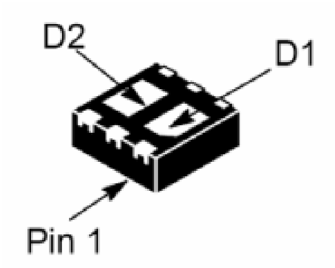
➢ Applications

- Li Battery Charging
- High Side DC/DC Converter
- Load Switch
- Powered Devices
- Power Management in Portable, Battery

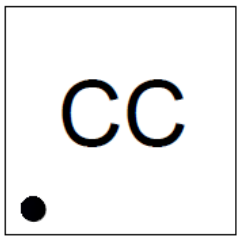
➢ Pin configuration

Top view





Bottom View



Marking

➢ Ordering Information

Device	Package	Shipping
SSC8322GN2	DFN2x2	3000/Reel

➢ **Absolute Maximum Ratings**(T$_A$=25℃ unless otherwise noted)

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	20	V
V_{GSS}	Gate-to-Source Voltage	±12	V
I_D	Continuous Drain Current [a]	4.4	A
I_{DM}	Pulsed Drain Current [b]	22	A
P_D	Power Dissipation [c]	2.2	W
P_{DSM}	Power Dissipation [a]	1.1	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]		120	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		60	

Note:

a. The value of RθJA is measured with the device mounted on 1 in^2 FR-4 board with 2oz.copper,in a still air environment with TA=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.

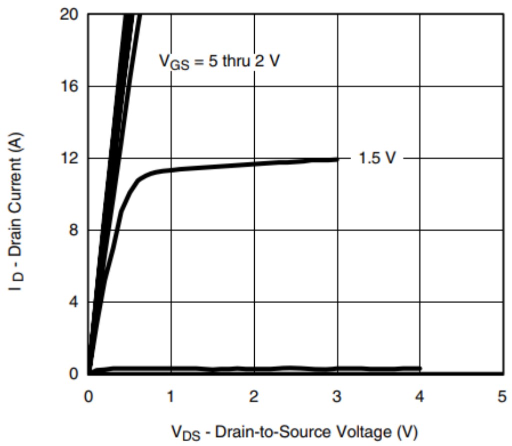
b. Repetitive rating, pulse width limited by junction temperature.

c. The power dissipation PD is based on TJ(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.

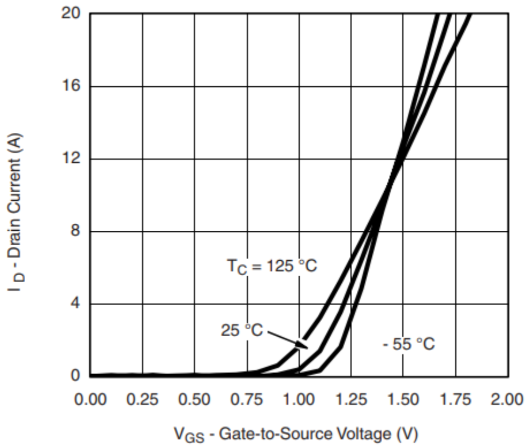
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V , ID=250uA	20			V
$V_{GS(th)}$	Gate Threshold Voltage	VDS=VGS , ID=250uA	0.4	0.7	1.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=4.5V , ID=3.6A		40	60	mR
		VGS=2.5V , ID=3.1A		50	80	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=20V , VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±12V , VDS=0V			±100	nA
V_{SD}	Forward Voltage	VGS=0V , IS=1.1A		0.8	1.15	V
G_{FS}	Transconductance	VDS=5V , ID=3.6A		13		S
Ciss	Input Capacitance	VDS=10V , VGS=0V , f=1MHz		450		pF
Coss	Output Capacitance			70		
Crss	Reverse Transfer Capacitance			43		
Qg	Total Gate charge	VGS=4.5V , VDS=15V , ID=3A		3		nC
Qgs	Gate to Source charge			0.6		
Qgd	Gate to Drain charge			1.1		
$T_{D(ON)}$	Turn-on delay time	VGS=4.5V, VDS=5V, RG=6R,ID=3.6A		15		ns
Tr	Rise time			18		
$T_{D(OFF)}$	Turn-off delay time			60		
Tf	Fall time			20		

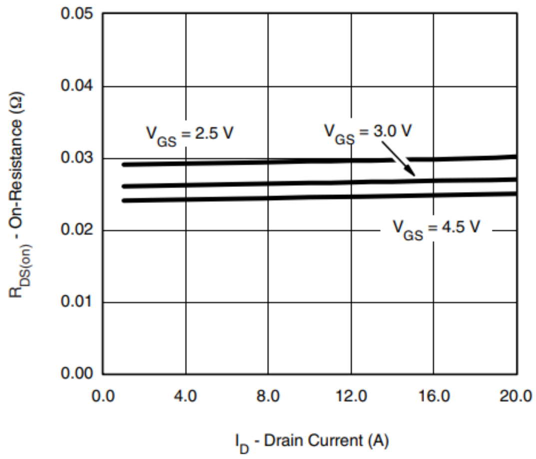
➢ **Typical Characteristics**(TA=25℃ unless otherwise noted)



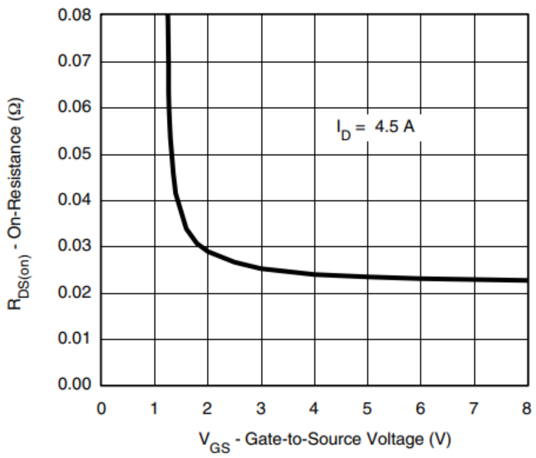
Output Characteristics



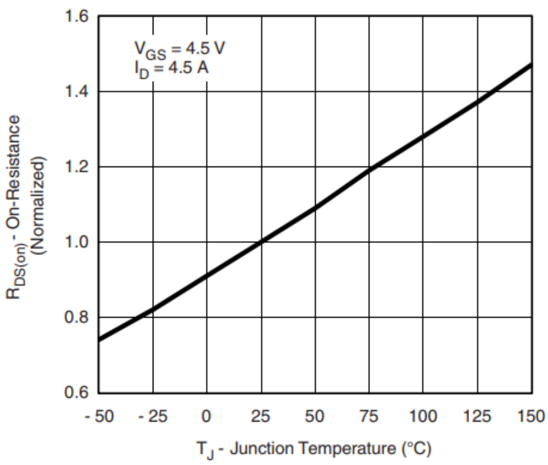
Transfer Characteristics



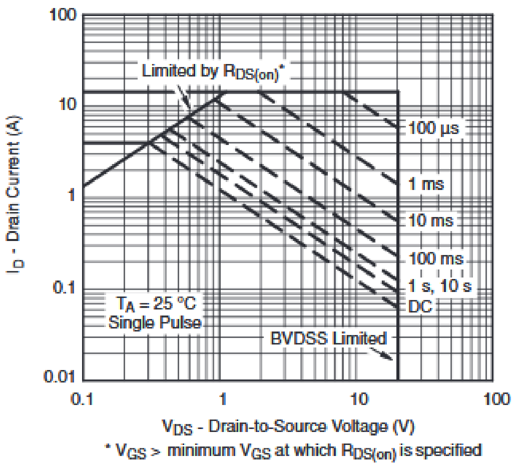
On-Resistance vs. Drain Current



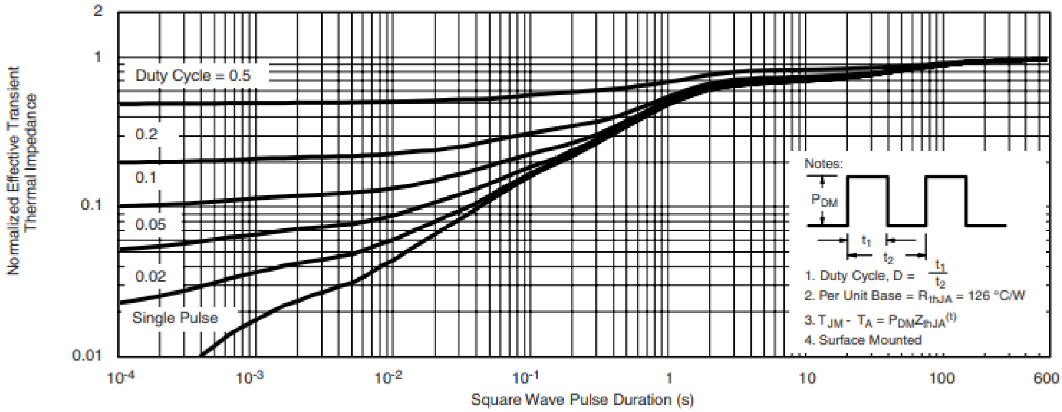
On-Resistance vs. Gate-to-Source Voltage



On-Resistance vs. Junction Temperature

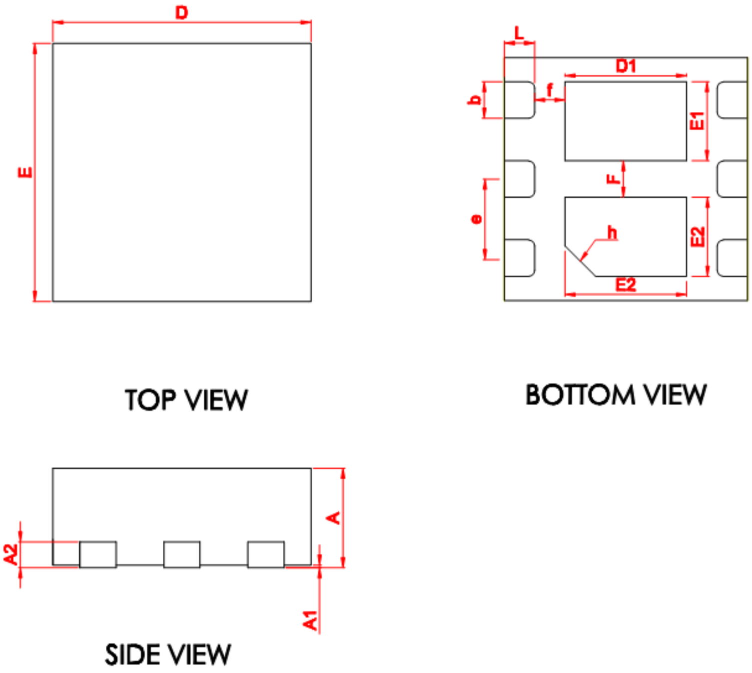


Safe Operating Area, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Ambient

➢ Package Information



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.700	0.750	0.800
* A1	0.000	0.020	0.050
* b	0.275	0.300	0.325
* A2	0.190	0.210	0.230
* D	1.900	2.000	2.100
* E	1.900	2.000	2.100
* E1	0.570	0.620	0.670
* E2	0.570	0.620	0.670
* D1	0.950	1.000	1.050
* D2	0.950	1.000	1.050
* e	0.600	0.650	0.700
h	0.300	0.350	0.400
* L	0.200	0.250	0.300
* F	0.250	0.300	0.350
* f	0.200	0.250	0.300

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