

## Dual N-Channel Enhancement Mode MOSFET

- **Features**

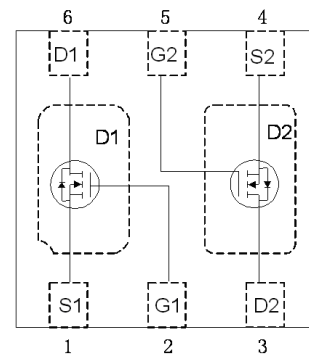
VDS	VGS	RDSon TYP	ID
20V	±12V	50mR@4V5	4A
		65mR@2V5	

- **Applications**

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

- **Pin Configuration**

Top View



- **General 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.

- **Package Information**

Package:DFN2x2			
Unit:mm			
Dim	Min	Typ	Max
A	1.95	2	2.08
B	1.95	2	2.08
C	0.5	0.6	0.7
D	0.9	1	1.1
E	0.545	0.575	0.605
F	-	0.13	-
G	0.2	0.25	0.3
H	0.25	0.3	0.35
I	-	0.65	-
J	-	0.45	-
K	-	0.15	-
L	-	0.23	-



# SSC8322GN2

● **Absolute Maximum Ratings** @  $T_A = 25^\circ\text{C}$  unless otherwise noted

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	20	V
Gate-Source Voltage	$V_{GSS}$	$\pm 12$	V
Drain Current	$I_D$	Continuous	4
		Pulsed	20
Power Dissipation <sup>(1)</sup>	$P_D$	1.5	W
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

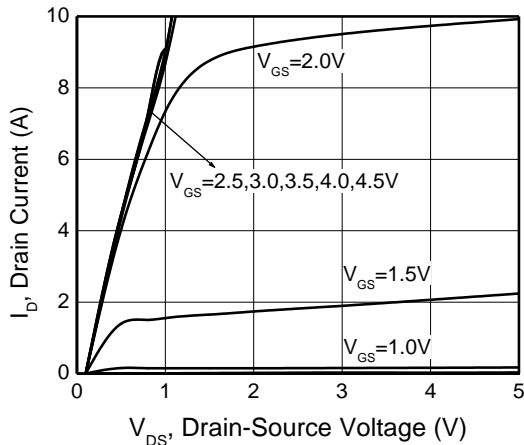
● **Electrical Characteristics** @  $T_A = 25^\circ\text{C}$  unless otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>OFF CHARACTERISTICS</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 10\mu\text{A}$	20	--	--	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 20\text{ V}, V_{GS} = 0\text{ V}$	--	--	1	$\mu\text{A}$
Gate-Body Leakage	$I_{GSS}$	$V_{GS} = \pm 12\text{ V}, V_{DS} = 0\text{ V}$	--	--	$\pm 100$	nA
<b>ON CHARACTERISTICS<sup>(2)</sup></b>						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 50\mu\text{A}$	0.4	0.75	1.2	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = 4.5\text{ V}, I_D = 3.6\text{ A}$	--	50	85	mR
		$V_{GS} = 2.5\text{ V}, I_D = 3.1\text{ A}$	--	65	115	
Forward Transconductance	$G_{FS}$	$V_{DS} = 5\text{ V}, I_D = 3.6\text{ A}$	2	7.7	14	S
<b>DYNAMIC CHARACTERISTICS</b>						
Input Capacitance	$C_{ISS}$	$V_{DS} = 10\text{ V}, V_{GS} = 0\text{ V},$ $f = 1.0\text{ MHz}$	--	450	--	pF
Output Capacitance	$C_{OSS}$		--	70	--	
Reverse Transfer Capacitance	$C_{RSS}$		--	43	--	
<b>SWITCHING CHARACTERISTICS</b>						
Turn-On Delay Time	$T_{D(ON)}$	$V_{DD} = 5\text{ V}, I_D = 3.6\text{ A},$ $V_{GS} = 4.5\text{ V}, R_{GEN} = 6\text{ R}$	--	--	15	nS
Turn-On Rise Time	$T_R$		--	--	80	
Turn-Off Delay Time	$T_{D(OFF)}$		--	--	60	
Turn-Off Fall Time	$T_F$		--	--	25	
<b>DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS</b>						
Diode Forward Voltage <sup>(2)</sup>	$V_{SD}$	$V_{GS} = 0\text{ V}, I_S = 1.1\text{ A}$	0.6	0.8	1.15	V

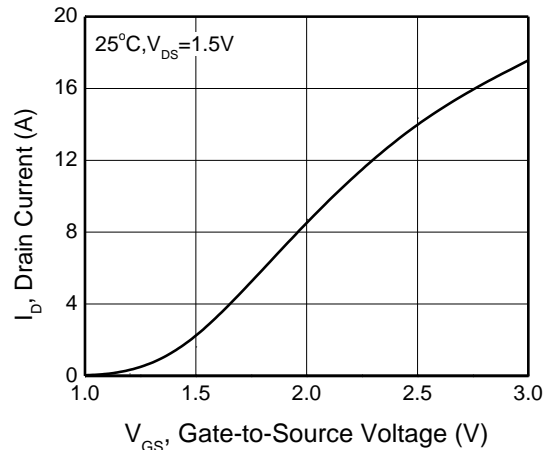
Notes :

1. Surface Mounted on FR4 Board,  $t < 10\text{ sec.}$
2. Pulse Test: Pulse Width  $< 300\mu\text{s}$ , Duty Cycle  $< 2\%$

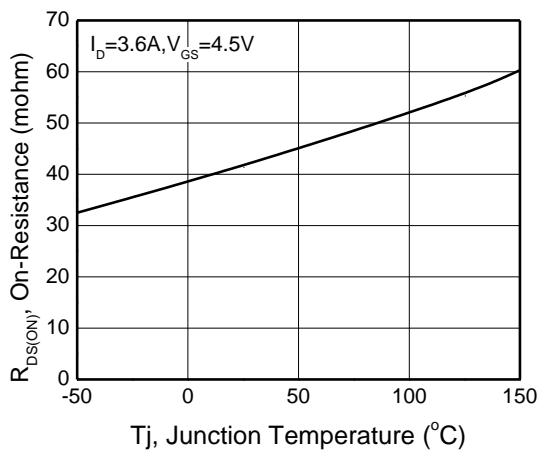
● **Typical Performance Characteristics**



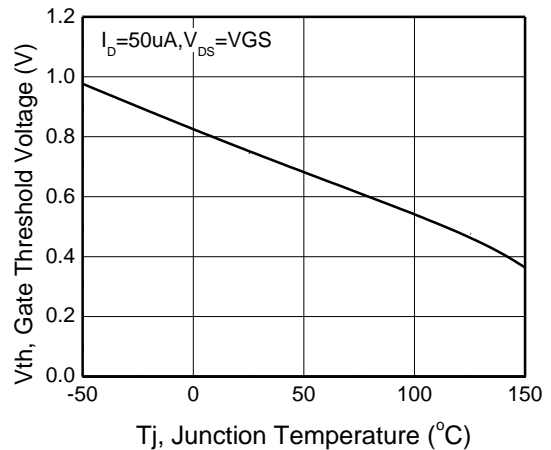
**Figure 1. Output Characteristics**



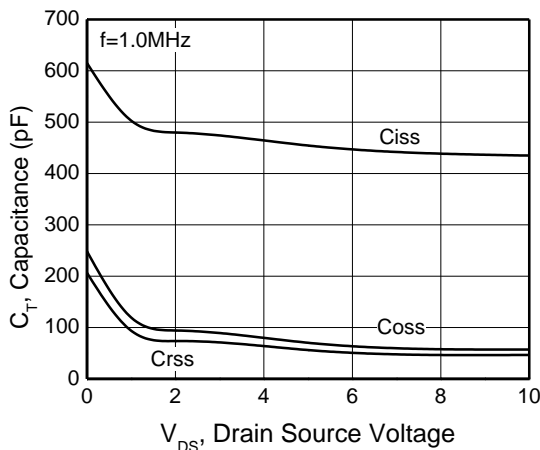
**Figure 2. Transfer Characteristics**



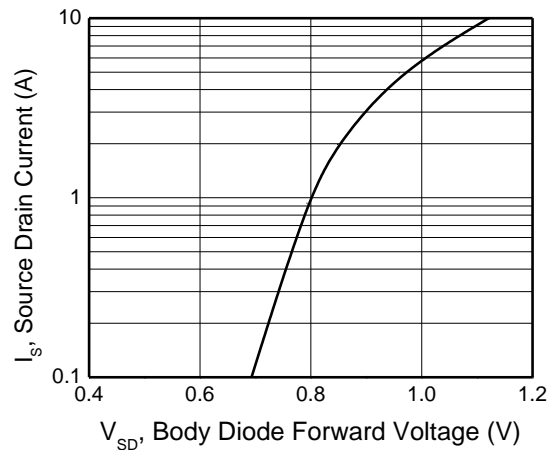
**Figure 4. On-Resistance vs. Temperature**



**Figure 5. Gate Threshold Vs. Temperature**



**Figure 3. Capacitance**



**Figure 6. Body Diode Forward Voltage vs. Source Current**



# SSC8322GN2

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