SSC8626GN2

N and P-Channel Enhancement Mode Power MOSFET

➢ Features

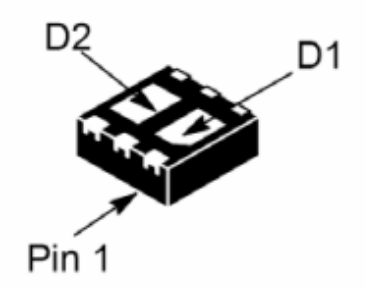
N-Channel

V_{DS}	V_{GS}	$R_{DS(ON)}$ Typ.	I_D
20V	±12V	22mΩ@4.5V	7A
		27mΩ@2.5V	
		36mΩ@1.8V	

P-Channel

V_{DS}	V_{GS}	$R_{DS(ON)}$ Typ.	I_D
-20V	±12V	63mΩ@-4.5V	-4A
		87mΩ@-2.5V	
		120mΩ@-1.8V	

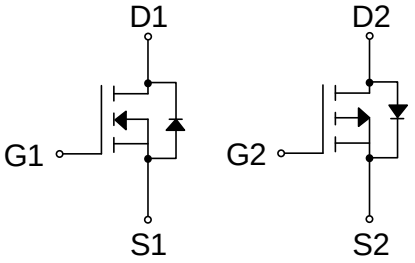
➢ Pin configuration



DFN2020-6L

➢ Description

SSC8626GN2 uses advanced trench technology to provide excellent RDSON and low gate charge. The complementary MOSFETS may be used to form a level shifted high side switch, and for a host of other applications.



Pin Configuration (Top View)

➢ Applications

- Signal
- CCFL Driver

➢ Ordering Information

Device	Package	Shipping
SSC8626GN2	DFN2020-6L	3000/Reel

Marking

➢ Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

Symbol	Parameter	N-Channel	P-Channel	Unit
V_{DSS}	Drain-to-Source Voltage	20	-20	V
V_{GSS}	Gate-to-Source Voltage	±12	±12	V
I_D	Continuous Drain Current [d]	7	-4	A
I_{DM}	Pulsed Drain Current [b]	21	-12	A
P_D	Power Dissipation [c]	1.9	1.9	W
T_J	Operation junction temperature	-55~150		℃
T_{STG}	Storage temperature range	-55~150		

➢ Thermal Resistance Ratings (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Ratings	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]	65	℃/W

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=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 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.

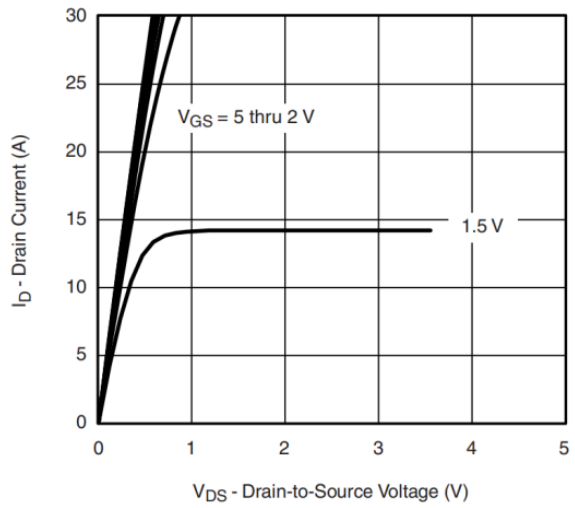
➢ N-Channel Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = 250uA	20			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250uA	0.4	0.7	1.3	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = 4.5V, I_D = 5A		22	26	mΩ
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = 2.5V, I_D = 3.5A		27	35	mΩ
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = 1.8V, I_D =2.8A		36	55	mΩ
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 16V, V_{GS} = 0V			1	μA
Gate-Source Leak Current	I_{GSS}	V_{GS} = ±12V, V_{DS} = 0V			±100	nA
Forward Transconductance	G_{FS}	V_{DS}=5V, I_D=7A		7		S
Forward Voltage	V_{SD}	V_{GS} = 0V, I_S = 1.1A		0.8	1.3	V
Input Capacitance	C_{ISS}	V_{DS} = 10V, V_{GS} = 0V, f = 1MHz		406		pF
Output Capacitance	C_{OSS}			68		
Reverse Transfer Capacitance	C_{RSS}			57		
Total Gate Charge	Q_G	V_{GS} = 4.5V, V_{DS} = 10V, I_D = 7A		11		nC
Gate to Source Charge	Q_{GS}			1		
Gate to Drain Charge	Q_{GD}			1.5		
Turn-on Delay Time	$T_{D(ON)}$	V_{GS} = 4.5V, V_{DS} = 10V, R_G = 3Ω, I_D = 7A		3		ns
Rise Time	T_r			7.5		
Turn-off Delay Time	$T_{D(OFF)}$			20		
Fall Time	T_f			6		

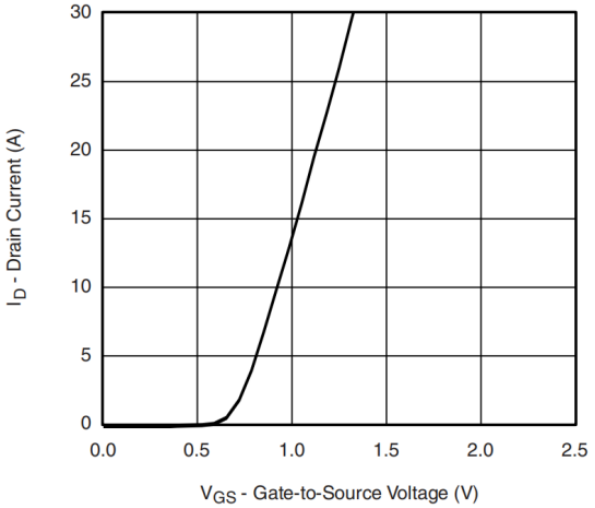
➢ P-Channel Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = -250uA	-20			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = -250uA	-0.5	-0.7	-1.2	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = -4.5V, I_D = -2.8A		63	80	mΩ
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = -2.5V, I_D = -2.3A		87	110	mΩ
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = -1.8V, I_D = -0.5A		120	200	mΩ
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -16V, V_{GS} = 0V			-1	μA
Gate-Source Leak Current	I_{GSS}	V_{GS} = ±12V, V_{DS} = 0V			±100	nA
Forward Transconductance	G_{FS}	V_{DS}=-5V, I_D=-4A		4		S
Forward Voltage	V_{SD}	V_{GS} = 0V, I_S = -0.9A		-0.7	-1.3	V
Input Capacitance	C_{ISS}	V_{DS} = -10V, V_{GS} = 0V, f = 1MHz		730		pF
Output Capacitance	C_{OSS}			72		
Reverse Transfer Capacitance	C_{RSS}			60		
Total Gate Charge	Q_G	V_{GS} = -4.5V, V_{DS} = -10V, I_D = -4A		8		nC
Gate to Source Charge	Q_{GS}			1		
Gate to Drain Charge	Q_{GD}			2		
Turn-on Delay Time	$T_{D(ON)}$	V_{GS} = -4.5V, V_{DS} = -10V, R_G = 3Ω, I_D = -4A		12		ns
Rise Time	T_r			11		
Turn-off Delay Time	$T_{D(OFF)}$			40		
Fall Time	T_f			17		

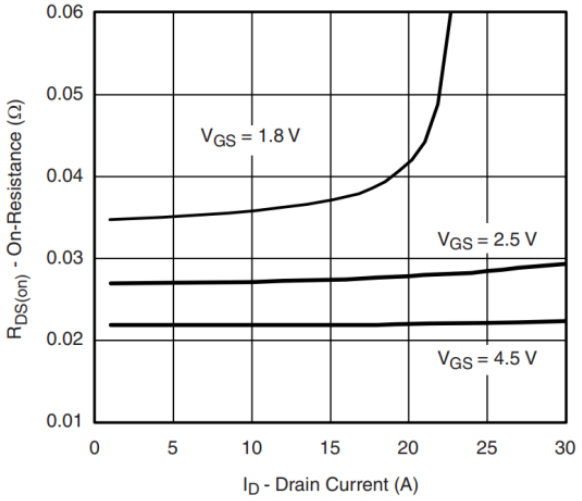
➢ N-Channel Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



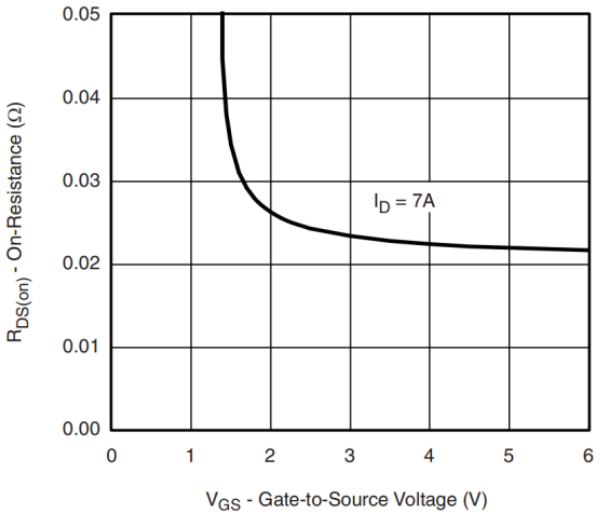
Output Characteristics



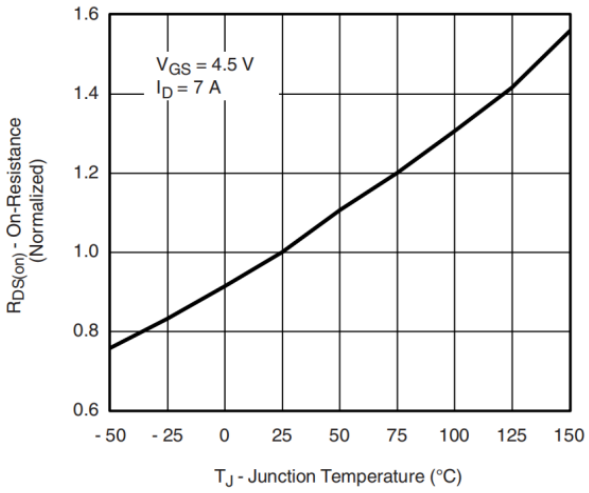
Transfer Characteristics



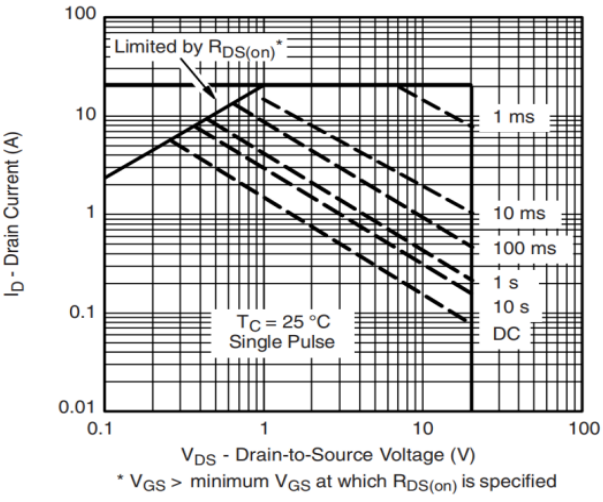
On-Resistance vs. Drain Current



On-Resistance vs. Gate-to-Source Voltage

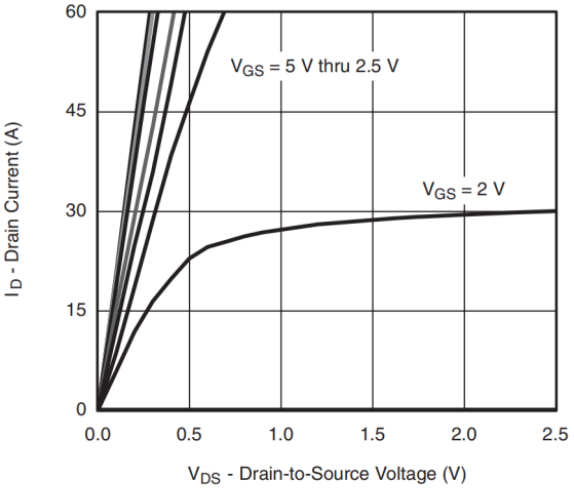


On-Resistance vs. Junction Temperature

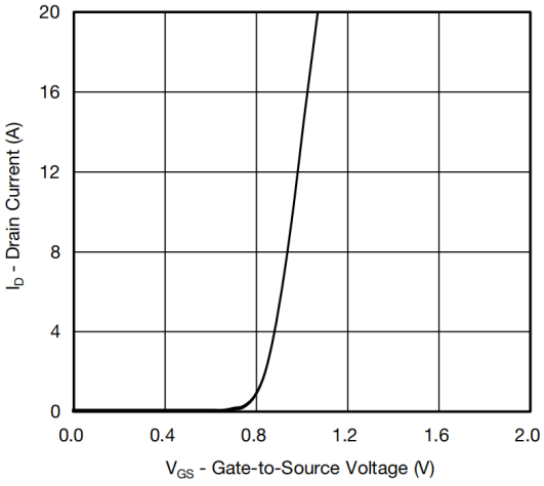


Safe Operating Area, Junction-to-Case

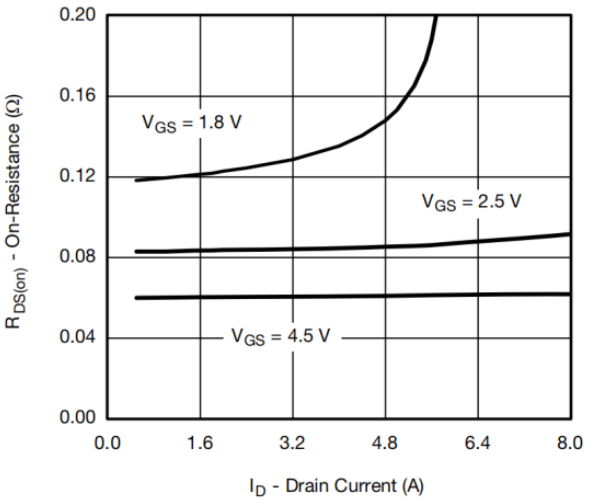
➢ P-Channel Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



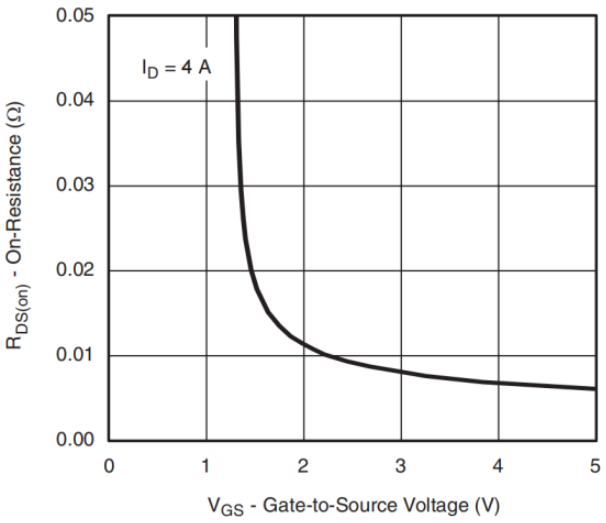
Output Characteristics



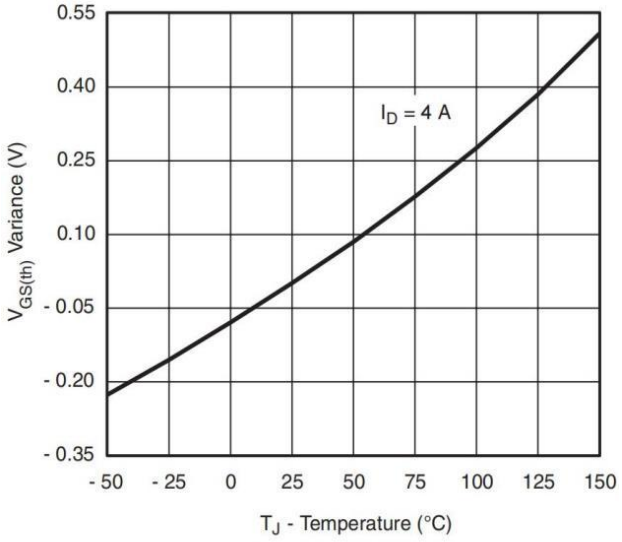
Transfer Characteristics



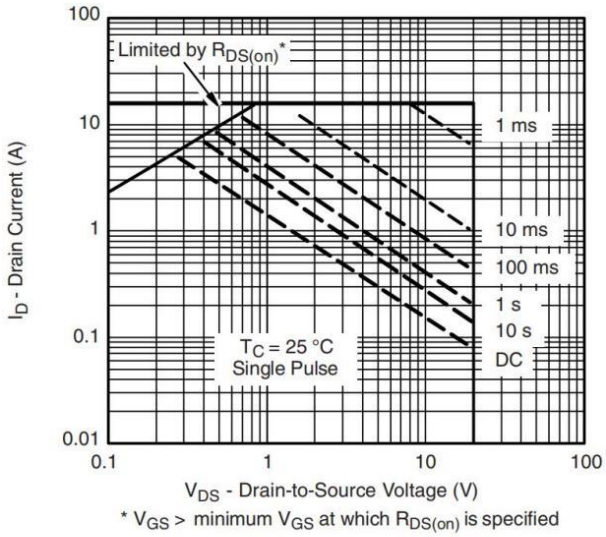
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

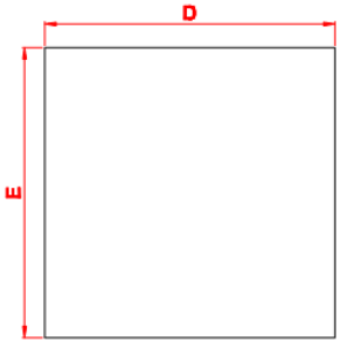


Threshold Voltage

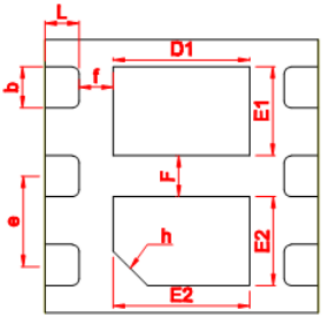


Safe Operating Area, Junction-to-Case

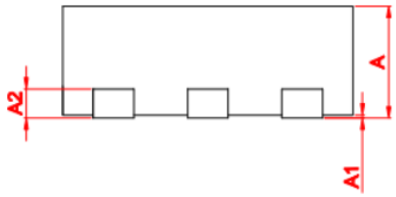
➢ **Package Information**



TOP VIEW



BOTTOM VIEW



SIDE VIEW

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

DISCLAIMER

SSCSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. SSCSEMI 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.

OUR PRODUCT SPECIFICATIONS ARE ONLY VALID IF OBTAINED THROUGH THE COMPANY'S OFFICIAL WEBSITE, CRM SYSTEM, OR OUR SALES PERSONNEL CHANNELS. IF CHANGES OR SPECIAL VERSIONS ARE INVOLVED, THEY MUST BE STAMPED WITH A QUALITY SEAL AND MARKED WITH A SPECIAL VERSION NUMBER TO BE VALID.