



SSC8027GN1

P-Channel Enhancement Mode MOSFET

➤ Features

VDS	VGS	RDSON Typ.	ID
-20V	±8V	115mR@-4V5	-1.3A
		170mR@-2V5	

➤ Description

This device is produced with high cell density DMOS trench technology, which is especially used to minimize on-state resistance. This device particularly suits low voltage applications such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation are needed in a very small outline surface mount package.

➤ Applications

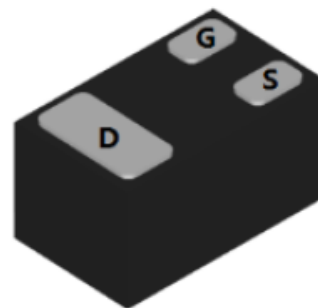
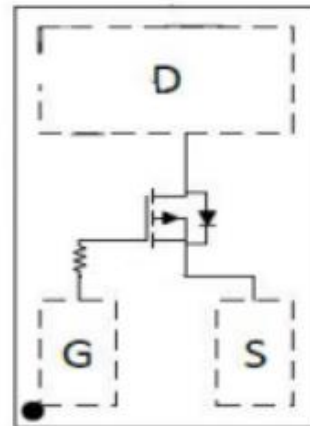
- Load Switch
- Portable Devices
- DCDC conversion

➤ Ordering Information

Device	Package	Shipping
SSC8027GN1	DFN1006	10K/Reel

➤ Pin configuration

Top view



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	-20	V
V_{GSS}	Gate-to-Source Voltage	± 8	V
I_D	Continuous Drain Current ^a	-1.3	A
I_{DM}	Pulsed Drain Current ^b	-5	A
P_D	Power Dissipation ^a	0.3	W
T_J	Operation junction temperature	-55 to 150	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55 to 150	$^{\circ}\text{C}$

➤ **Thermal Resistance Ratings**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Ratings	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance ^a	416	$^{\circ}\text{C}/\text{W}$

Note:

- a. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in² 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.
- b. Repetitive rating, pulse width limited by junction temperature.

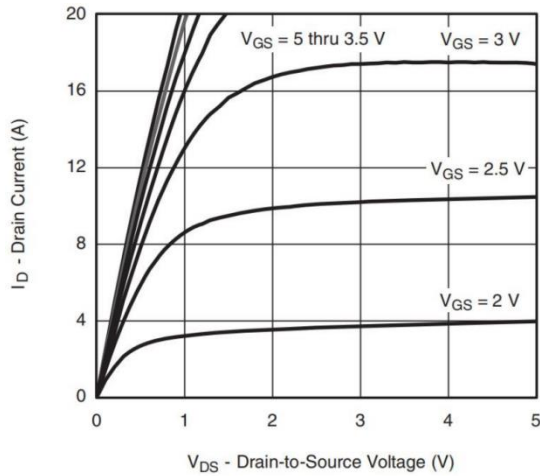


➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

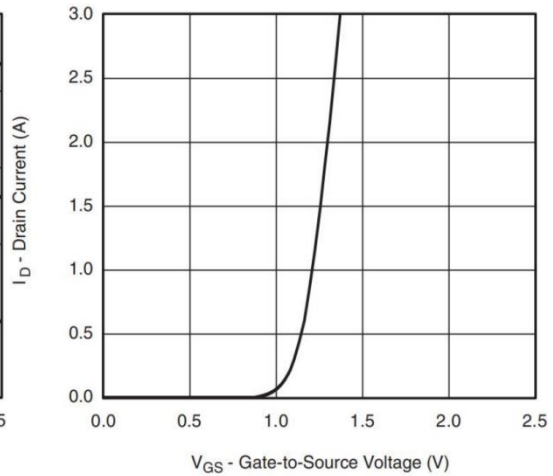
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	-20			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.45	-0.8	-1.5	V
$R_{DS(on)}$	Drain-Source On- Resistance	$V_{GS}=-4.5V, I_D=-0.45A$		115	160	mR
		$V_{GS}=-2.5V, I_D=-0.35A$		170	240	
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=-20V, V_{GS}=0V$			-1	μA
I_{GSS}	Gate-Source leak current	$V_{GS}=\pm 8V, V_{DS}=0V$			± 100	nA
G_{FS}	Transconductance	$V_{DS}=-5V, I_D=-1.4A$		6.5		S
V_{SD}	Forward Voltage	$V_{GS}=0V, I_S=-1A$	-0.5	-0.7	-1.2	V
C_{iss}	Input Capacitance	$V_{DS}=-6V, V_{GS}=0V,$ $f=1MHz$		370		pF
C_{oss}	Output Capacitance			190		
C_{rss}	Reverse Transfer Capacitance			85		
$T_{D(ON)}$	Turn-on delay time			16		
T_r	Rise time	$V_{GS}=-6V,$ $V_{GEN}=-4.5V, R_L=6R,$ $R_G=6R, I_D=-1.0A$		10		ns
$T_{D(OFF)}$	Turn-off delay time			45		
T_f	Fall time			11		



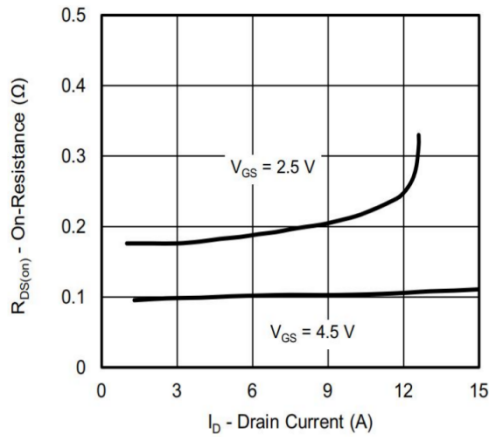
➤ **Typical Characteristics** ($T_A=25^\circ\text{C}$ unless otherwise noted)



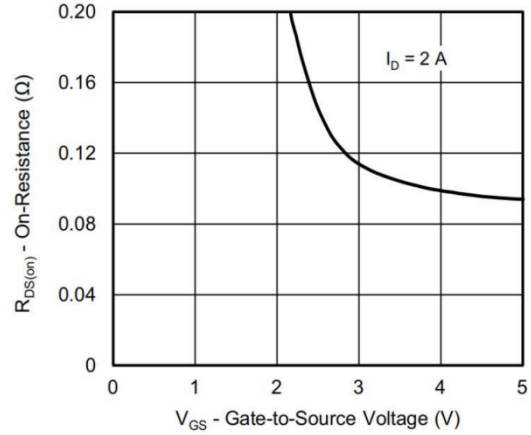
Output Characteristics



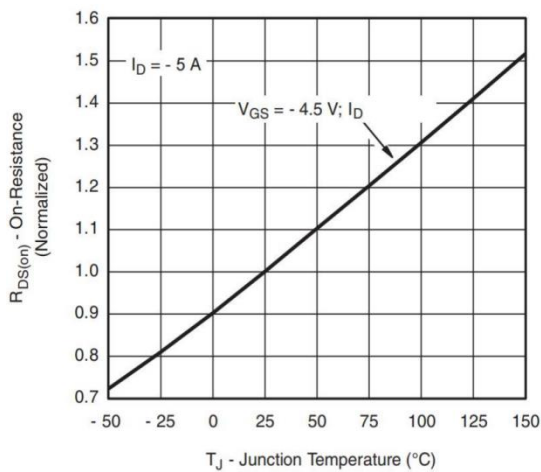
Transfer Characteristics



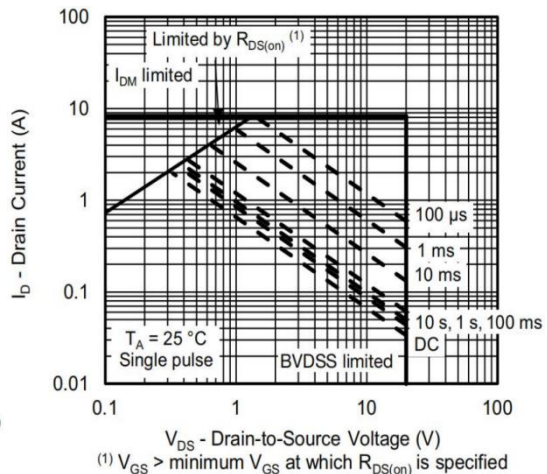
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

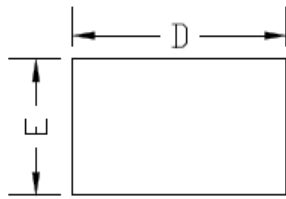


On-Resistance vs. Junction Temperature

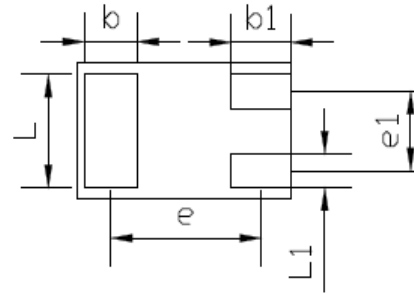


Safe Operating Area, Junction-to-Ambient

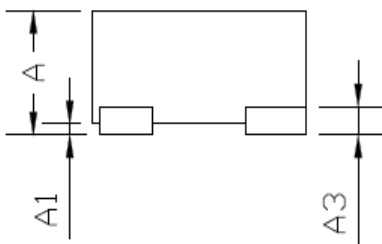
➤ **Package Information**



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (MM)			
PKG	DFN1006		
REF.	MIN.	NOM.	MAX
A	>0.4	-	0.50
A1	0.00	-	0.05
A3	0.125REF.		
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
b1	0.20	0.30	0.40
L	0.45	0.50	0.55
L1	0.10	0.15	0.20
e	0.675		
e1	0.35		

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