SSC8027GN1

P-Channel Enhancement Mode MOSFET

➢ Features

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

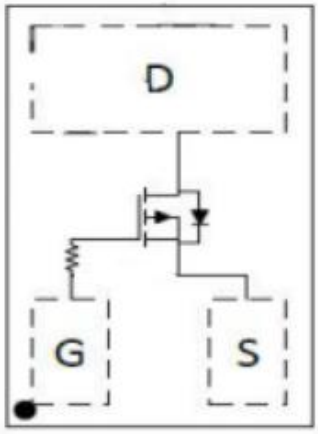
- Load Switch
- Portable Devices
- DCDC conversion

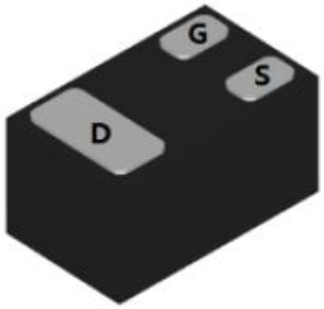
➢ Ordering Information

Device	Package	Shipping
SSC8027GN1	DFN1006	10K/Reel

➢ Pin configuration

Top view





Bottom View

Marking

➢ Absolute Maximum Ratings(T_A=25℃ 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]	-2	A
I_{DM}	Pulsed Drain Current [b]	-8	A
P_D	Power Dissipation [a]	0.8	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	Ratings	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]	166	℃/W

Note:

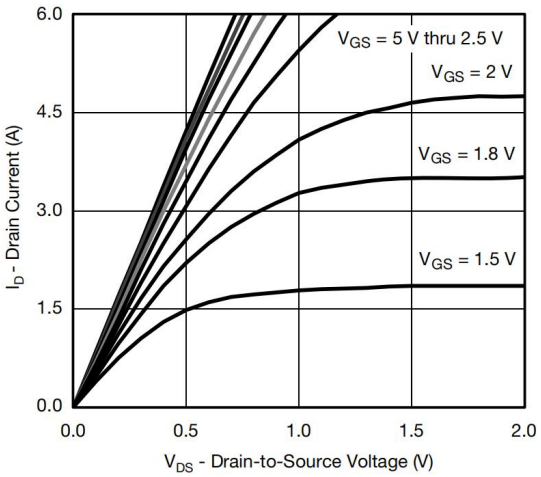
a. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in^2 FR-4 board with 2oz.copper,in a still air environment with T_A=25℃.The value in any given application depends on the user is specific board design. The current rating is based on the t≤ 10s thermal resistance rating.

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

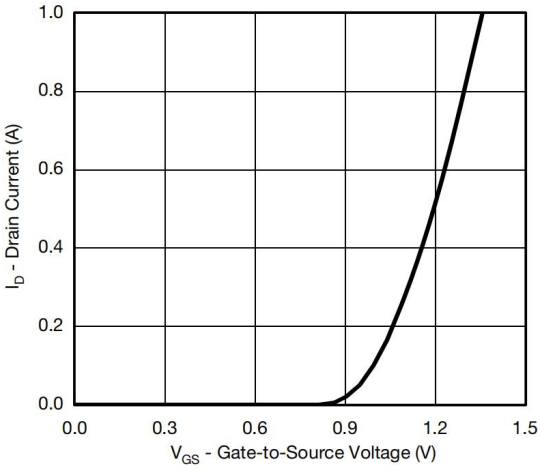
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

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	-0.45	-0.8	-1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=-4.5V,ID=-0.45A		115	160	mR
		VGS=-2.5V,ID=-0.35A		170	240	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=-20V,VGS=0V			-1	uA
I_{GSS}	Gate-Source leak current	VGS=±8V,VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=-5V,ID=-1.4A		6.5		S
V_{SD}	Forward Voltage	VGS=0V,IS=-1A	-0.5	-0.7	-1.2	V
Ciss	Input Capacitance	VDS=-6V, VGS=0V, f=1MHz		370		pF
Coss	Output Capacitance			190		
Crss	Reverse Transfer Capacitance			85		
$T_{D(ON)}$	Turn-on delay time	VGS=-6V, VGEN=-4.5V, RL=6R, RG=6R,ID=-1.0A		16		ns
Tr	Rise time			10		
$T_{D(OFF)}$	Turn-off delay time			45		
Tf	Fall time			11		

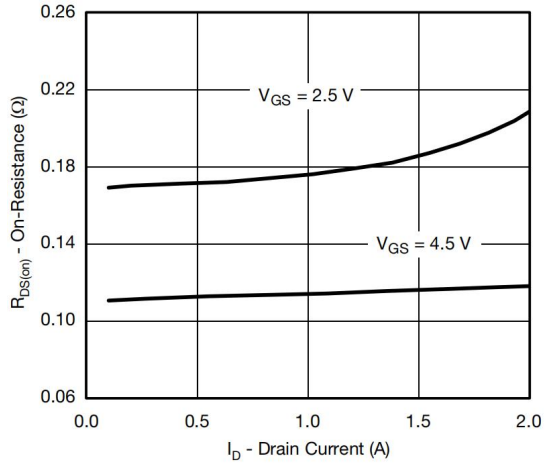
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



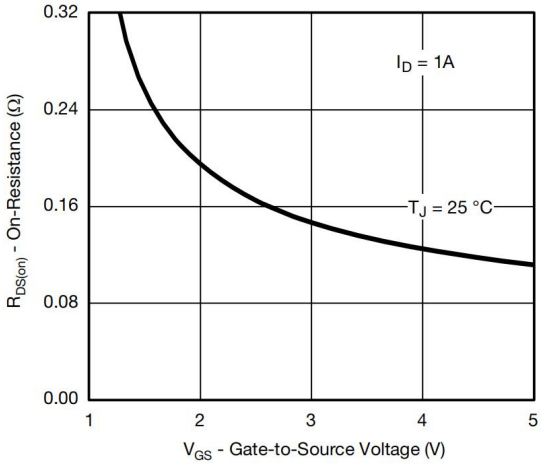
Output Characteristics



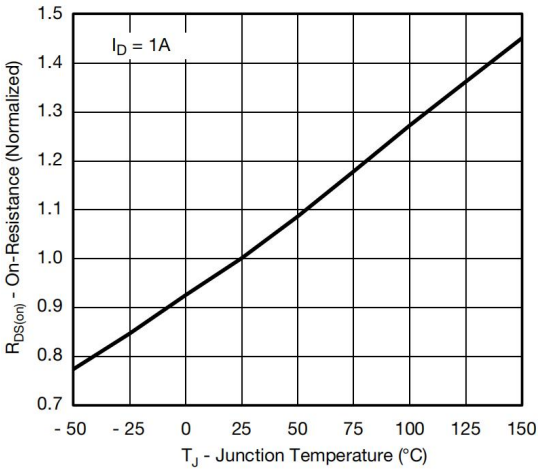
Transfer Characteristics



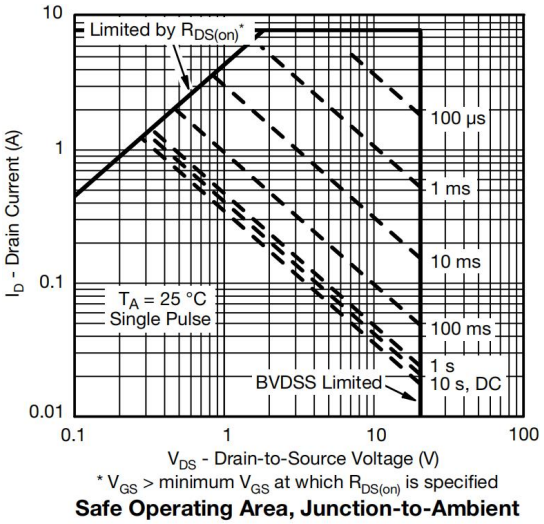
On-Resistance vs. Drain Current



On-Resistance vs. Gate-to-Source Voltage

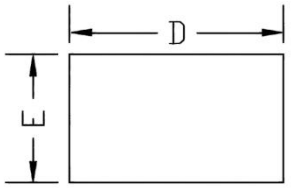


On-Resistance vs. Junction Temperature

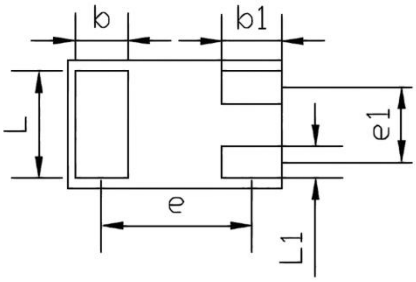


Safe Operating Area, Junction-to-Ambient

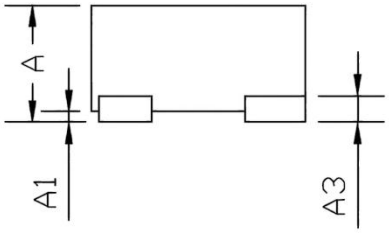
➢ Package Information



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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