SSC8037GS1

P-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
-30V	±25V	15mR@-10V	-34A
		23mR@-4V5	

➢ Description

This device is produced with high cell density DMOS trench technology, uses advanced trench technology and design to provide excellent RDSON with low gate charge. 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.

100% UIS Tested.

➢ Applications

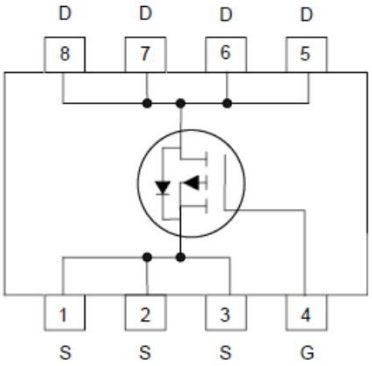
- Load Switch
- NB battery
- DCDC conversion

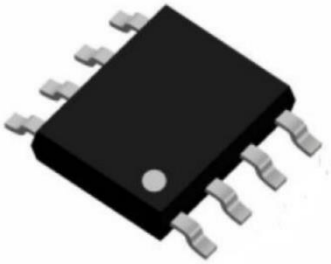
➢ Ordering Information

Device	Package	Shipping
SSC8037GS1	SOP8	4000/Reel

➢ Pin configuration

Top view





Bottom View

(Y: year/W: week)

Marking

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

Symbol	Parameter		Ratings	Unit
V_{DSS}	Drain-to-Source Voltage		-30	V
V_{GSS}	Gate-to-Source Voltage		±25	V
I_D	Continuous Drain Current [d]	TC=25℃	-34	A
		TC=100℃	-19	
I_{DSM}	Continuous Drain Current [a]	TA=25℃	-10.7	A
		TA=70℃	-7.8	
I_{DM}	Pulsed Drain Current [b]		-136	A
I_{AS}	Avalanche Current[b] L=0.5mH		-21	A
E_{AS}	Avalanche Energy[b] L=0.5mH		110	mJ
P_D	Power Dissipation [d]	TC=25℃	28	W
		TC=100℃	11	W
P_{DSM}	Power Dissipation [a]	TA=25℃	2.8	W
		TA=70℃	1.8	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]	45	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance [c]	22	
	Junction-to-Case Thermal Resistance [d]	4.4	

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.

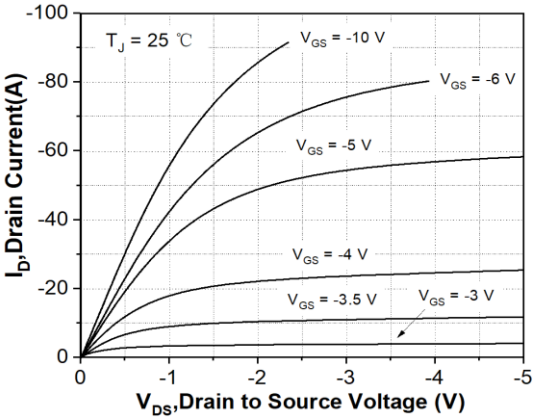
c. The power dissipation PD is based on TJ(MAX)=150°C, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.

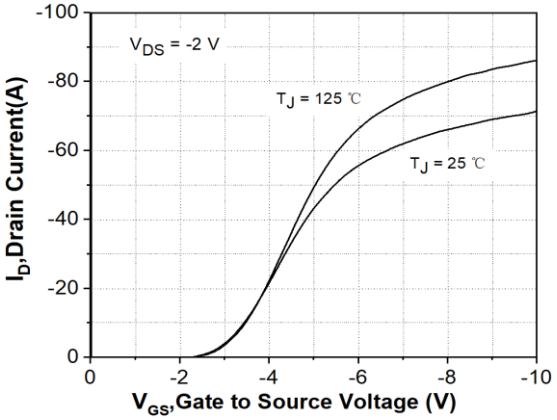
d. The value of $R_{\theta JC}$ has been determined of the temperature difference between junction and the case surface in contact with water cooled copper heat sink .

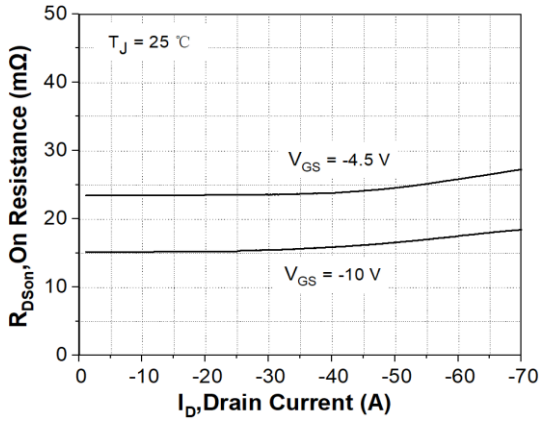
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

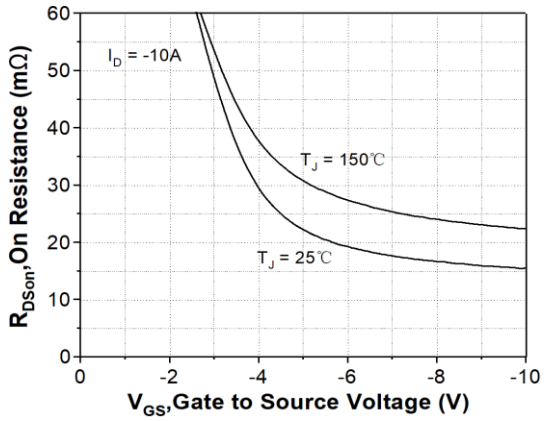
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V , ID=-250uA	-30			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS , ID=-250uA	-1	-1.6	-3	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=-10V , ID=-10A		15	19	mR
		VGS=-4.5V , ID=-7A		23	30	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=-30V , VGS=0V			-1	uA
I_{GSS}	Gate-Source leak current	VGS=±25V , VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=-5V , ID=-5A		11		S
V_{SD}	Forward Voltage	VGS=0V , IS=-5A		-0.8	-1.3	V
Ciss	Input Capacitance	VDS=-15V , VGS=0V, f=1MHz		1300		pF
Coss	Output Capacitance			161		
Crss	Reverse Transfer Capacitance			183		
Q_G	Total Gate charge	VGS=-10V , VDS=-15V, ID=-10A		25.5		nC
Q_{GS}	Gate to Source charge			4.3		
Q_{GD}	Gate to Drain charge			6.1		
$T_{D(ON)}$	Turn-on delay time	VGS=-10V, VDS=-15V, RL=1R, RG=3R		8		ns
Tr	Rise time			33.5		
$T_{D(OFF)}$	Turn-off delay time			48		
Tf	Fall time			11		
Trr	Diode Recovery Time	IF=-10A, di/dt=200A/us		23		ns
Qrr	Diode Recovery Charge			8		nC

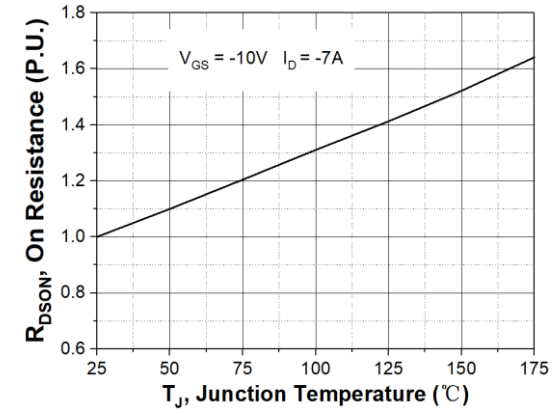
➢ **Typical Characteristics**(T_A=25℃ unless otherwise noted)

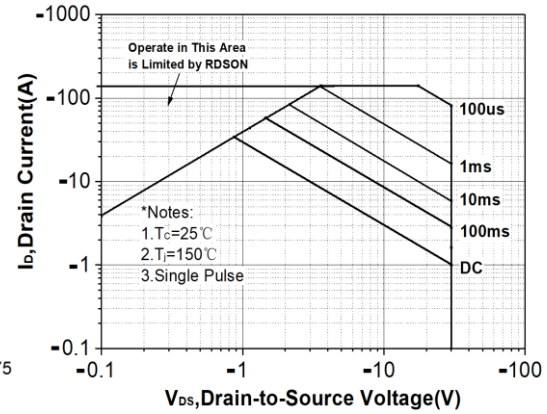


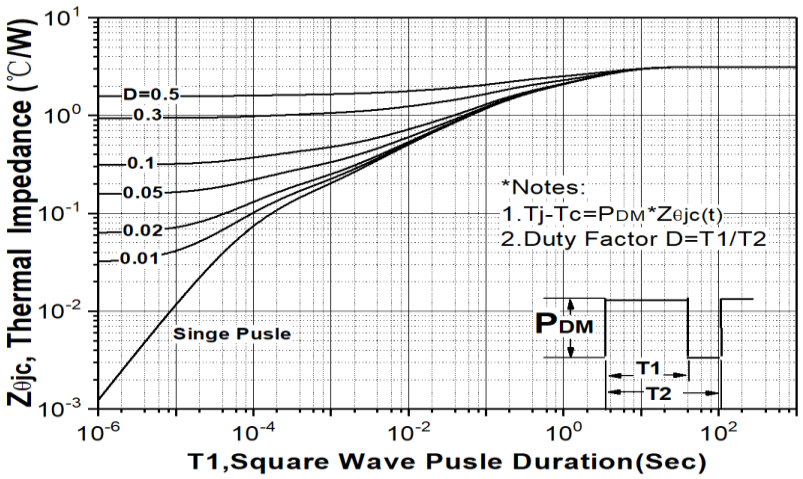




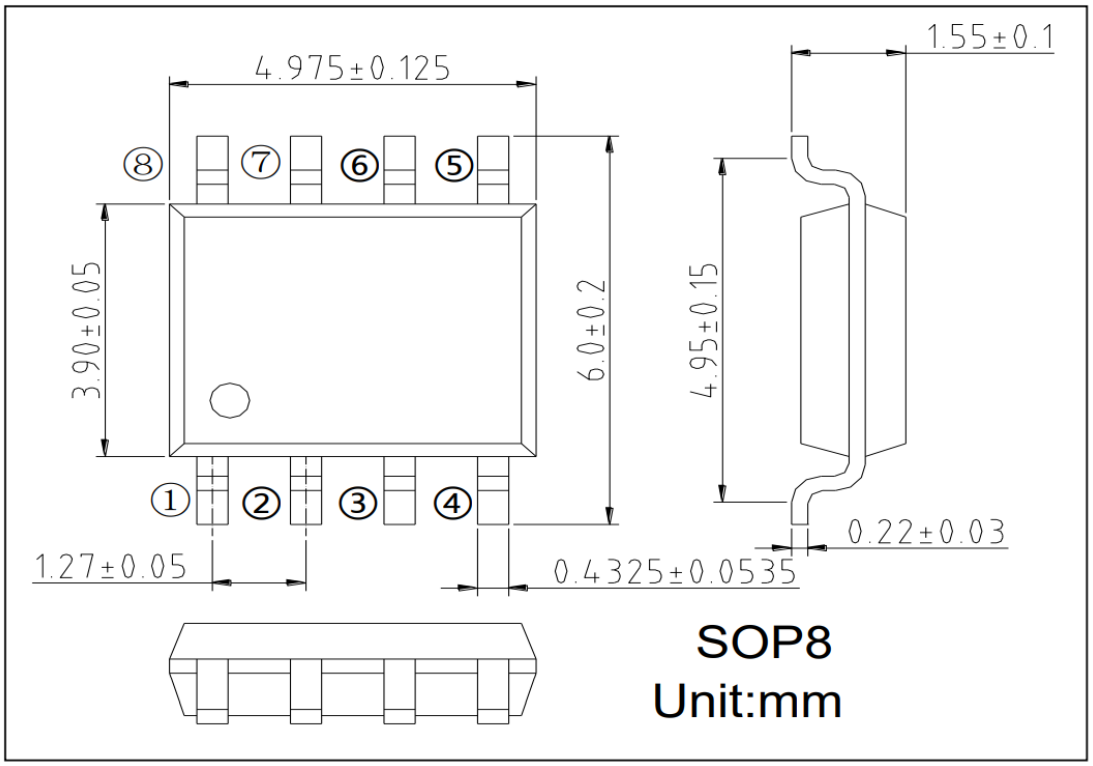








➢ Package Information



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