SSC8336GS1

Dual N-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
30V	±20V	16mR@10V	9A
		20mR@4V5	

➢ Description

This device is produced with high cell density, DMOS trench technology, which is especially used to minimize on-state resistance. This device is particularly suited for low voltage power management requiring a wild range of given voltage ratings(4.5V~25V) such as load switch and battery protection.

➢ Applications

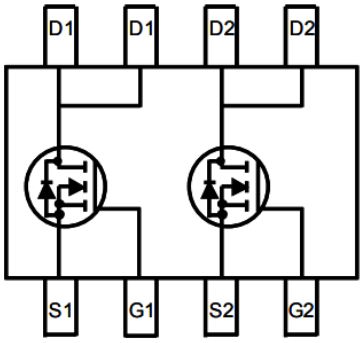
- Li Battery
- Battery charge
- Load Switch

➢ Ordering Information

Device	Package	Shipping
SSC8336GS1	SOP-8	2500/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	30	V
V_{GSS}	Gate-to-Source Voltage	±20	V
I_D	Continuous Drain Current [a]	9	A
I_{DM}	Pulsed Drain Current [b]	36	A
P_D	Power Dissipation [c]	3.8	W
P_{DSM}	Power Dissipation [a]	1.5	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	Typical	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]		100	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		40	

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.

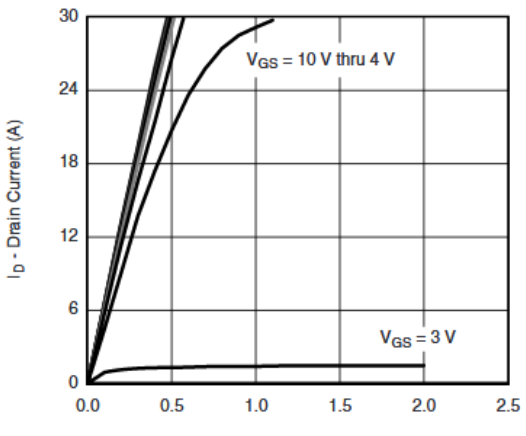
b. Repetitive rating, pulse width limited by junction temperature.

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.

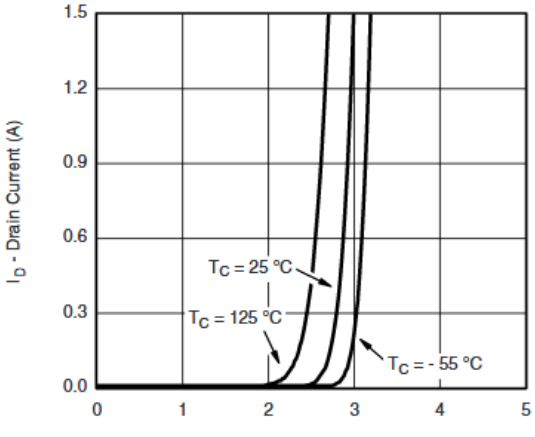
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

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	1.5	2.1	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=10V,ID=6.9A		16	20	mR
		VGS=4.5V,ID=5.8A		20	26	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=24V,VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±20V,VDS=0V			±100	nA
V_{SD}	Forward Voltage	VGS=0V,IS=1.7A		0.8	1	V
G_{FS}	Transconductance	VDS=10V , ID=6A		30		S
Ciss	Input Capacitance	VDS=15V, VGS=0V, f=1MHz		570		pF
Coss	Output Capacitance			113		
Crss	Reverse Transfer Capacitance			57		
$T_{D(ON)}$	Turn-on delay time	VGS=10V, VDS=15V, RL=2.3R,RG=3R,ID=5A		8		ns
Tr	Rise time			5		
$T_{D(OFF)}$	Turn-off delay time			25		
Tf	Fall time			7		
Qg	Total Gate charge	VGS=4.5V , VDS=15V , ID=3A		7.3		nC
Qgs	Gate to Source charge			2.6		
Qgd	Gate to Drain charge			3		

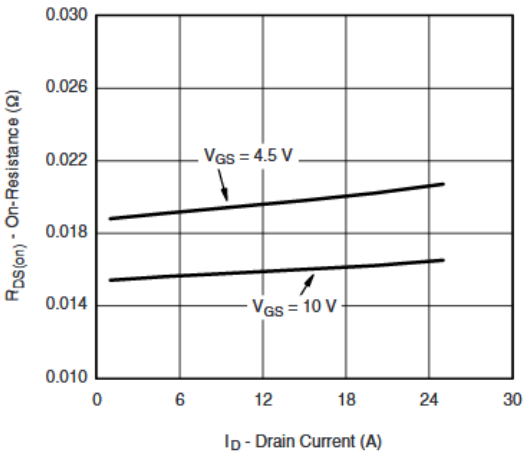
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



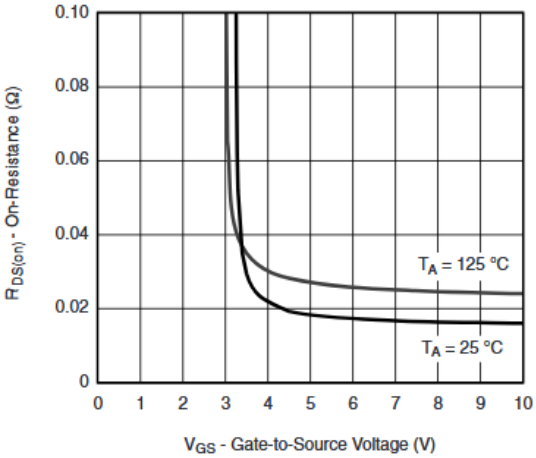
Output Characteristics



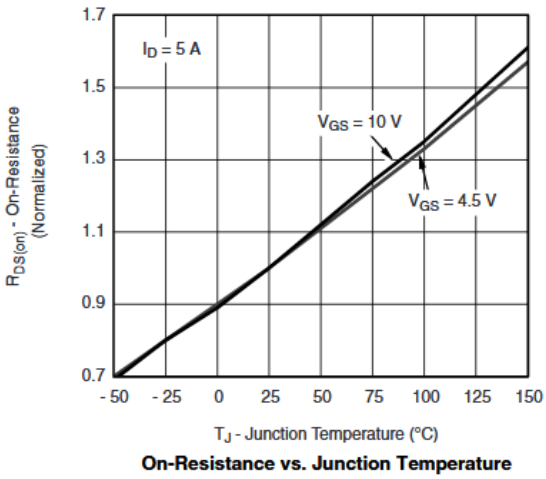
Transfer Characteristics



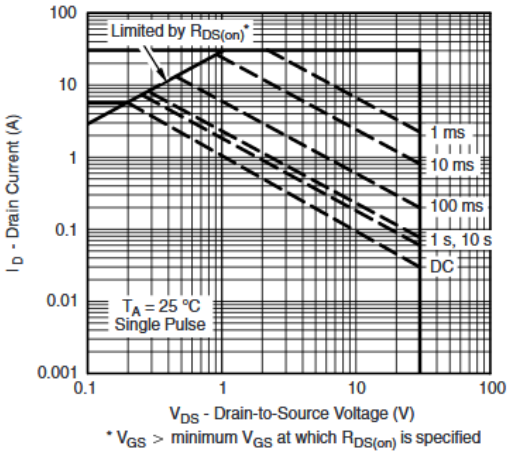
On-Resistance vs. Drain Current and Gate Voltage



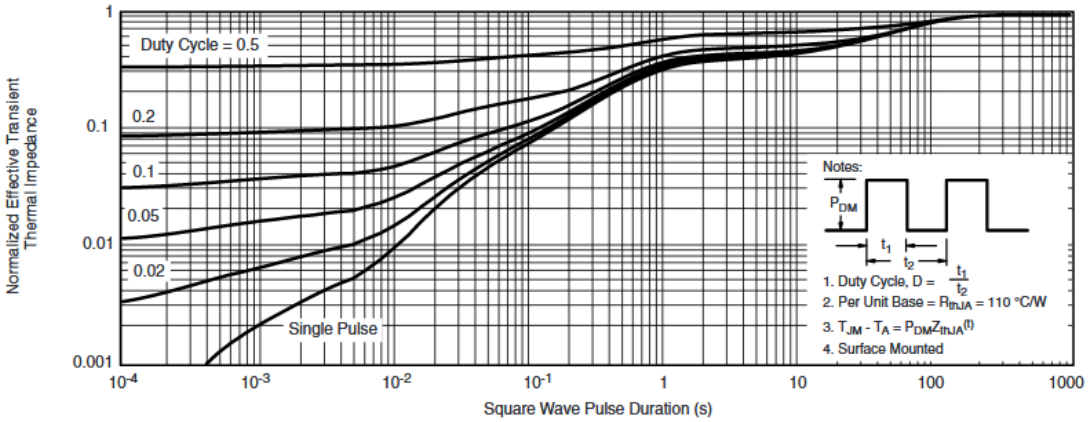
On-Resistance vs. Gate-to-Source Temperature



On-Resistance vs. Junction Temperature

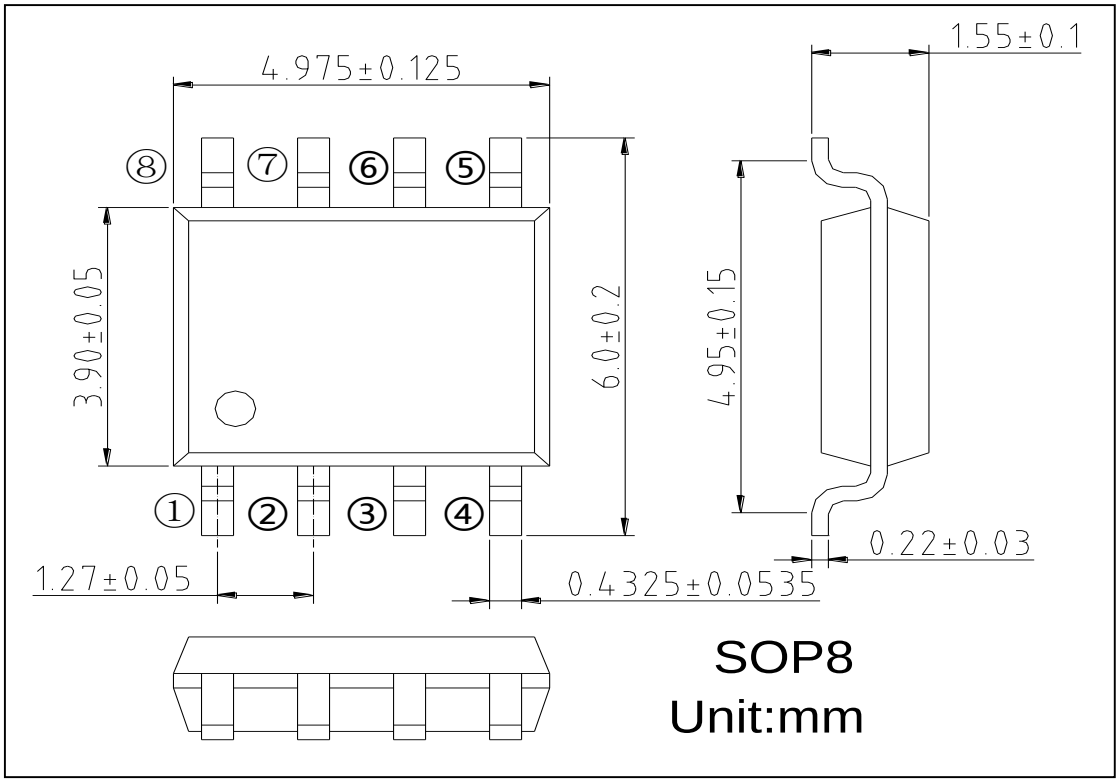


Safe Operating Area, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Ambient

➢ Package Information



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