SSC8329GS1

Dual P-Channel Enhancement Mode MOSFET

➢ Features

V_{DS}	V_{GS}	$R_{DS(ON)}$ Typ.	I_D
-20V	±12V	11mΩ@-4V5	-16A
		14.5mΩ@-2V5	

➢ 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.

100% UIS + ΔVDS + Rg Tested!

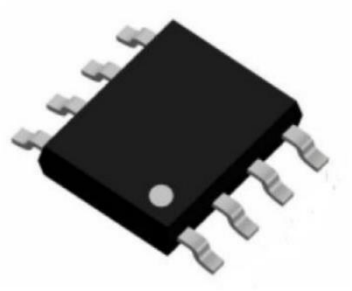
➢ Applications

- NB Battery
- DC/DC Conversion
- Load Switch

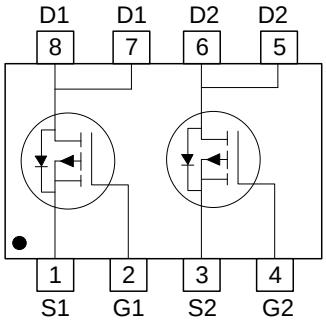
➢ Ordering Information

Device	Package	Shipping
SSC8329GS1	SOP-8	4000/Reel

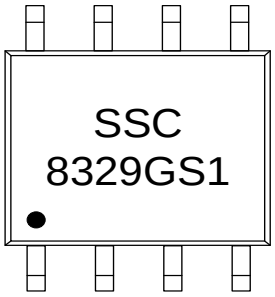
➢ Pin configuration



SOP-8 (Top View)



Pin Configuration



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		±12	V
I_D	Continuous Drain Current [d]	T_C=25℃	-16	A
		T_C=100℃	-9	
I_{DSM}	Continuous Drain Current [a]	T_A=25℃	-11	A
		T_A=70℃	-8	
I_{DM}	Pulsed Drain Current [b]		-64	A
P_D	Power Dissipation [c]	T_C=25℃	4.8	W
		T_C=100℃	1.9	
P_{DSM}	Power Dissipation [a]	T_A=25℃	2.1	W
		T_A=70℃	1.3	
E_{AS}	Avalanche Energy [b] L=0.5mH Single Pulse		121	mJ
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]	60	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance	25	

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 power dissipation is based on the t≤10s thermal resistance rating.

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

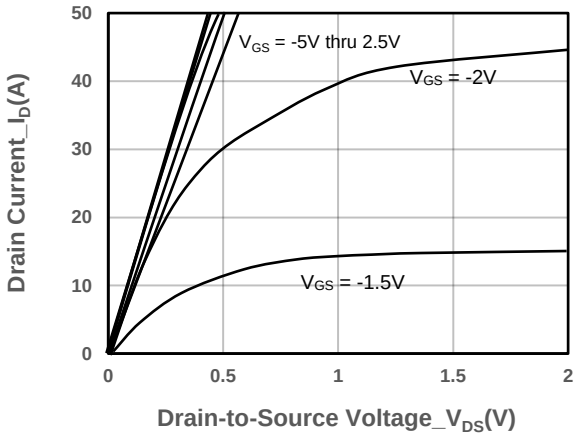
c. The power dissipation P_D is based on $T_{J(MAX)}$=150°C, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.

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.

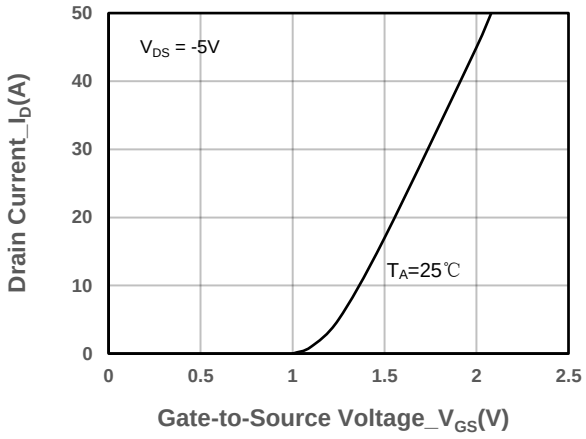
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

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	-0.75	-1.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = -4.5V, I_D = -10A		11	16	mΩ
		V_{GS} = -2.5V, I_D = -7A		14.5	21	
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -16V, V_{GS} = 0V			-1	uA
Gate-Source Leak Current	I_{GSS}	V_{GS} = ±12V, V_{DS} = 0V			±100	nA
Forward Voltage	V_{SD}	V_{GS} = 0V, I_S = -2.3A			-1.3	V
Input Capacitance	C_{ISS}	V_{DS} = -10V, V_{GS} = 0V, f = 1MHz		3398		pF
Output Capacitance	C_{OSS}			415		
Reverse Transfer Capacitance	C_{RSS}			370		
Total Gate Charge	Q_G	V_{GS} = -4.5V, V_{DS} = -10V, I_D = -5A		41		nC
Gate to Source Charge	Q_{GS}			4.2		
Gate to Drain Charge	Q_{GD}			7.9		
Turn-on Delay Time	$T_{D(ON)}$	V_{GS} = -4.5V, V_{DS} = -10V, I_D = -5A, R_L = 2Ω, R_G = 1Ω		22		ns
Rise Time	T_r			25		
Turn-off Delay Time	$T_{D(OFF)}$			74		
Fall Time	T_f			27		

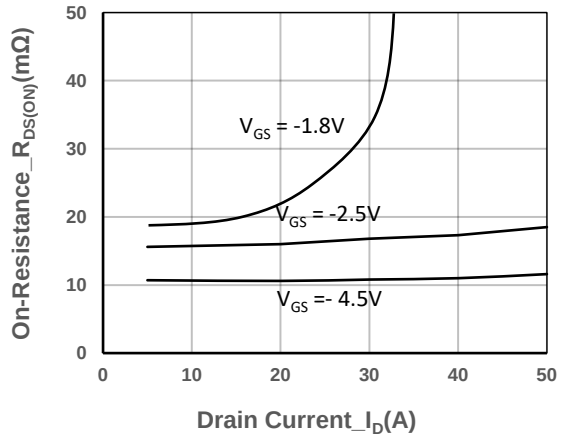
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



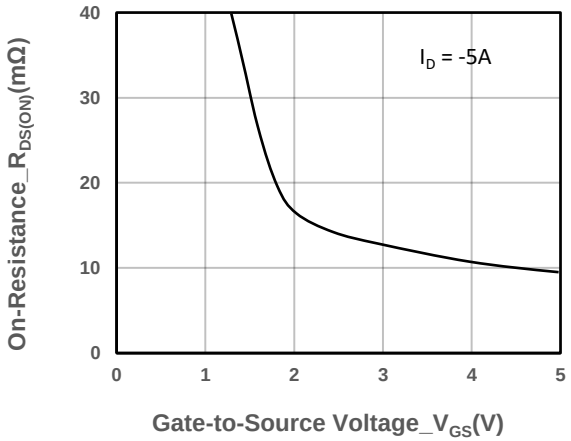
Output Characteristics



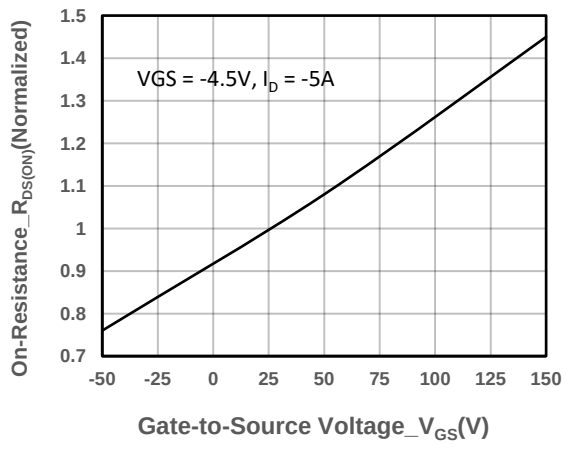
Transfer Characteristics



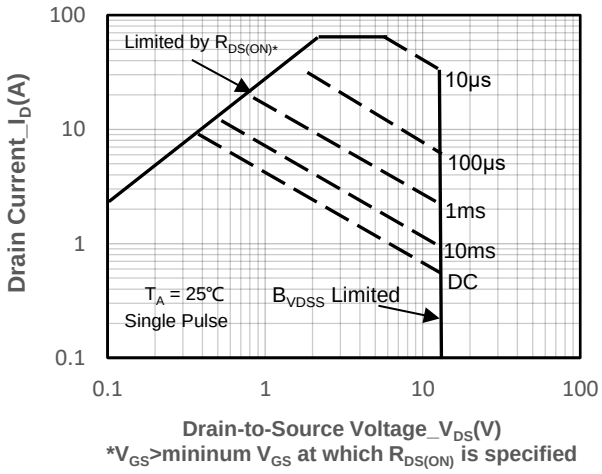
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

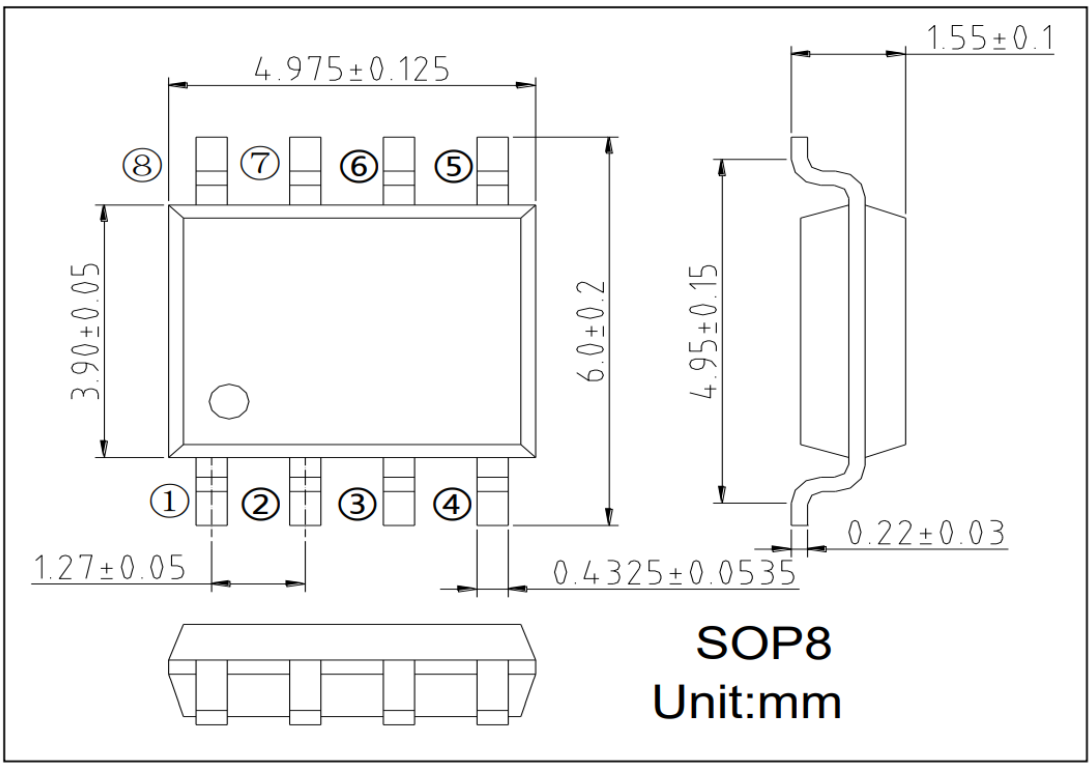


On-Resistance vs. Junction Temperature



Safe Operating Area vs. Junction-to-Ambient

➢ Package Information



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