



SSC8135GSB

P-Channel Enhanced MOSFET

> Features

VDS	VGS	RDSON Typ.	ID
-30V	±12V	27mΩ@-4V5	-6A
		35mΩ@-2V5	

> Description

The SSC8135GSB is P-Channel enhancement MOS Field Effect Transistor. Uses advanced trench technology and design to provide excellent RDSON with low gate charge. This device is suitable for use in DC-DC conversion and power switch applications.

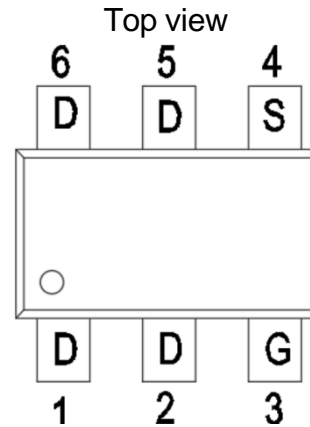
> Applications

- Load Switch
- Portable Switch
- DCDC conversion
- Charging
- Driver for Relay, Motor, Solenoid, LED etc.

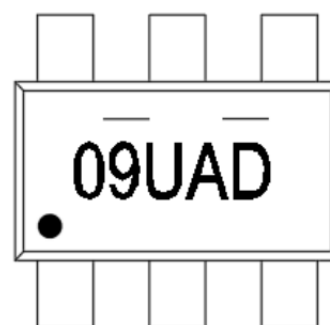
> Ordering Information

Device	Package	Shipping
SSC8135GSB	SOT-23-6L	3000/Reel

> Pin configuration



SOT-23-6L



Marking



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

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	-30	V
V_{GSS}	Gate-to-Source Voltage	± 12	V
I_D	Continuous Drain Current ^a	-6	A
I_{DM}	Pulsed Drain Current ^b	-24	A
P_D	Power Dissipation ^a	1.6	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	Typical	Maximum	Unit
$R_{\theta JA}$	Junction- to- Ambient Thermal Resistance ^a		80	$^{\circ}\text{C}/\text{W}$

Note:

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

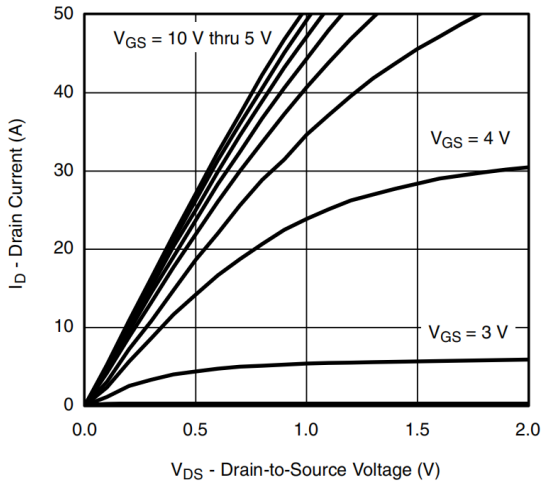


➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

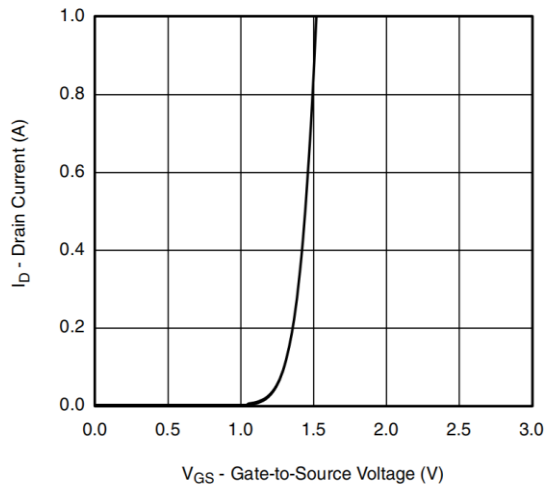
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	-30			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.7	-1.0	-1.3	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=-4.5V, I_D=-1A$		27	36	mΩ
		$V_{GS}=-2.5V, I_D=-1A$		35	46	
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=-30V, V_{GS}=0V$			-1	μA
I_{GSS}	Gate-Source leak current	$V_{GS}=\pm 12V, V_{DS}=0V$			±100	nA
G_{FS}	Transconductance	$V_{DS}=-10V, I_D=-2A$		9		s
V_{SD}	Forward Voltage	$V_{GS}=0V, I_S=-1A$		0.8	1.3	V
C_{iss}	Input Capacitance	$V_{DS}=-15V, V_{GS}=0V, f=1\text{MHz}$		1520		pF
C_{oss}	Output Capacitance			170		
C_{rss}	Reverse Transfer Capacitance			155		
$T_{D(ON)}$	Turn-on delay time	$V_{GS}=-4.5V, R_L=15\Omega, V_{DS}=-15V, R_G=6\Omega, I_D=-1A$		21		ns
T_r	Rise time			10		
$T_{D(OFF)}$	Turn-off delay time			62		
T_f	Fall time			23		
Q_G	Total Gate Charge	$V_{GS}=-4.5V, V_{DS}=-15V, I_D=-1A$		21		nC
Q_{GS}	Gate to Source Charge			3.7		
Q_{GD}	Gate to Drain Charge			5.3		



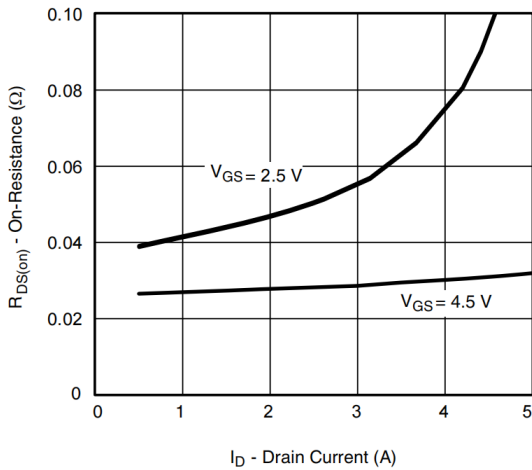
Typical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)



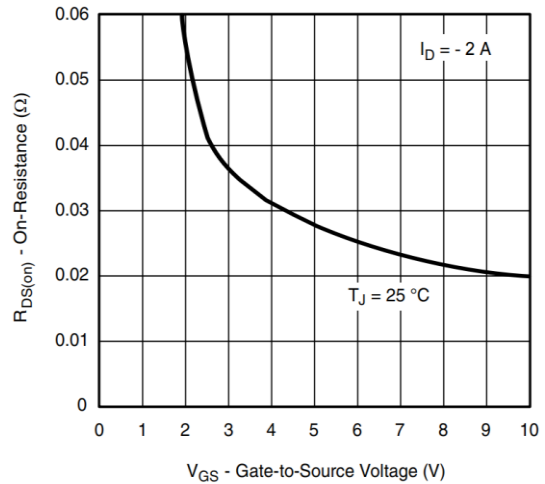
Output Characteristics



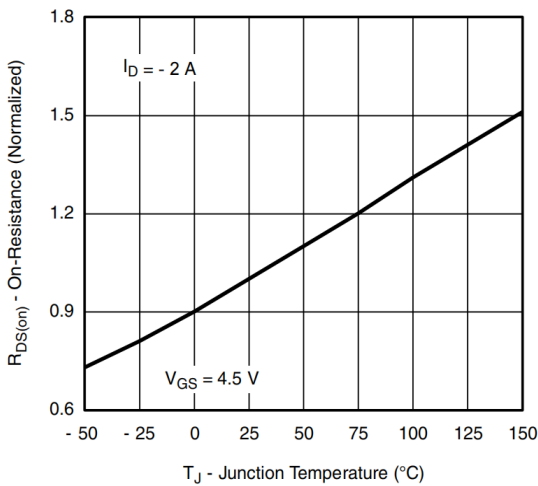
Transfer Characteristics



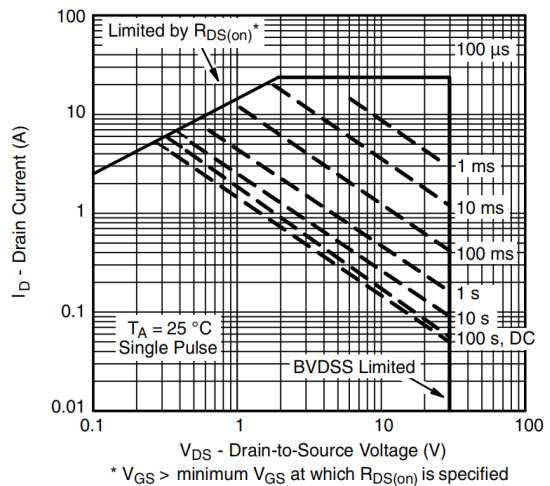
On-Resistance vs. Drain Current



On-Resistance vs. Gate-to-Source Voltage



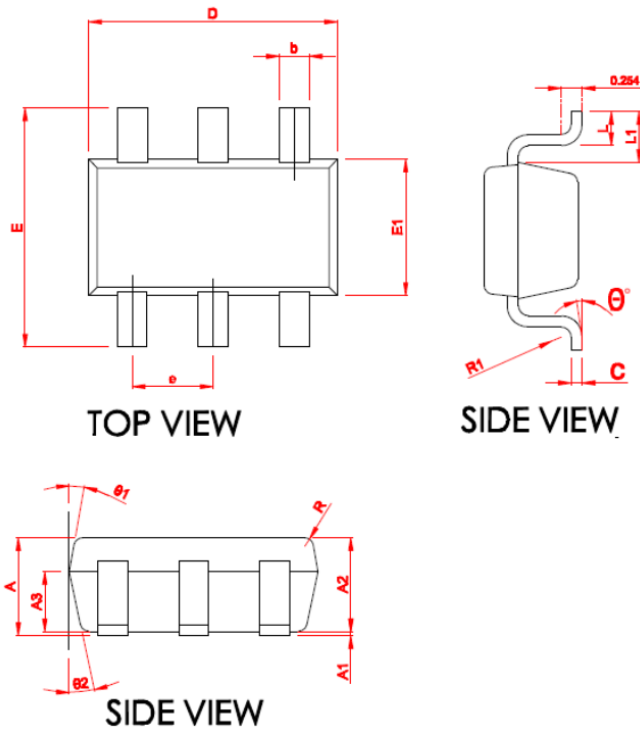
On-Resistance vs. Junction Temperature



Safe Operating Area



➤ Package Information



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	1.06	1.15	1.24
* A1	0.01	0.05	0.09
* A2	1.05	1.10	1.15
A3	0.65	0.70	0.75
* b	0.30	0.35	0.45
* c	0.117	0.127	0.157
* D	2.87	2.92	2.97
* E	2.72	2.80	2.88
* E1	1.55	1.60	1.65
* e	0.90	0.95	1.00
* L	0.32	0.40	0.48
* L1	0.55	0.60	0.65
R	0.10 REF		
R1	0.12 REF		
* theta	0	--	8°
theta1	8°	10°	12°
theta2	10°	12°	14°

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