SSC8035GSB

P-Channel Enhanced MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
-30V	±12V	44mR@-10V	-4.5A
		52mR@-4V5	
		68mR@-2V5	

➢ Description

The SSC8035GSB 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

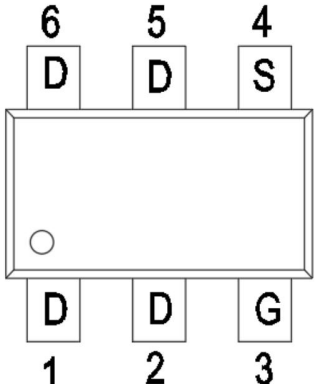
- Load Switch
- Portable Switch
- DCDC conversion
- Charging
- Driver for Relay, Motor, Solenoid, LED etc.

➢ Ordering Information

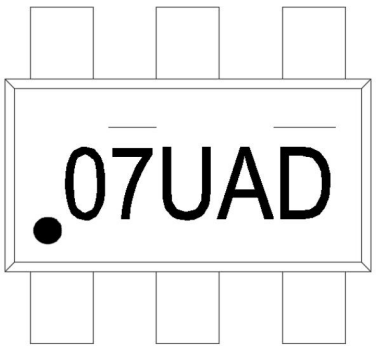
Device	Package	Shipping
SSC8035GSB	SOT-23-6L	3000/Reel

➢ Pin configuration

Top view



SOT-23-6L



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	±12	V
I_D	Continuous Drain Current [a]	-4.5	A
I_{DM}	Pulsed Drain Current [b]	-22	A
P_D	Power Dissipation [c]	1.6	W
P_{DSM}	Power Dissipation [a]	0.98	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]		129	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		80	

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.

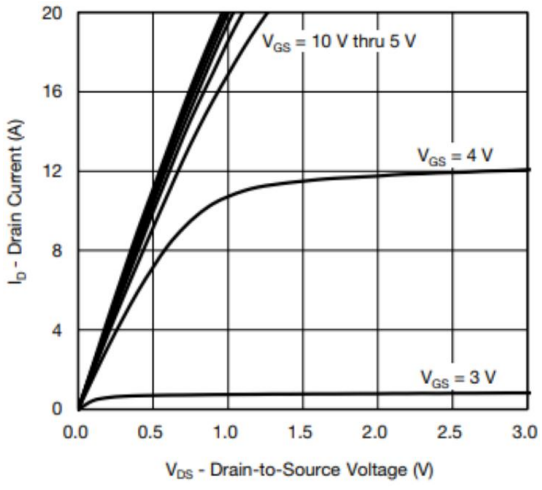
b. Repetitive rating, pulse width limited by junction temperature.

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.

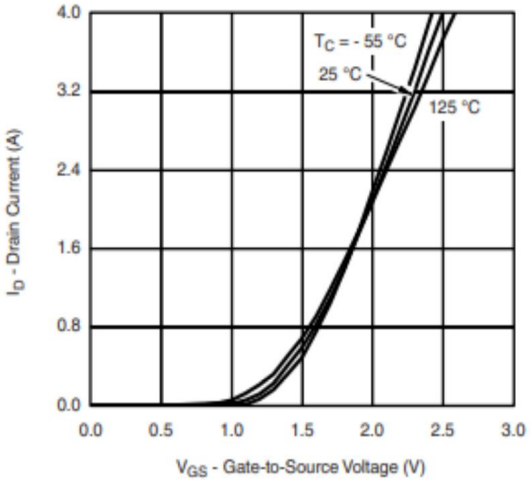
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

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	-0.6	-0.9	-1.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=- 10V , ID=-4A		44	65	mR
		VGS=-4.5V , ID=-2A		52	75	
		VGS=-2.5V , ID=- 1A		68	100	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=-30V , VGS=0V			-1	uA
I_{GSS}	Gate-Source leak current	VGS=±12V , VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=- 10V , ID=-5A		9		s
V_{SD}	Forward Voltage	VGS=0V , IS=-2A			1.3	V
Ciss	Input Capacitance	VDS=- 15V , VGS=0V, f=1MHz		1001		pF
Coss	Output Capacitance			121		
Crss	Reverse Transfer Capacitance			100		
$T_{D(ON)}$	Turn-on delay time	VGS=- 10V, RL=15R VDS=- 15V , RG=6R, ID=-4.2A		11		ns
Tr	Rise time			6		
$T_{D(OFF)}$	Turn-off delay time			49		
Tf	Fall time			11		
Q_G	Total Gate Charge	VGS=- 10V, VDS=- 15V ID=-4.2A		16		nC
Q_{GS}	Gate to Source Charge			2.3		
Q_{GD}	Gate to Drain Charge			3.1		

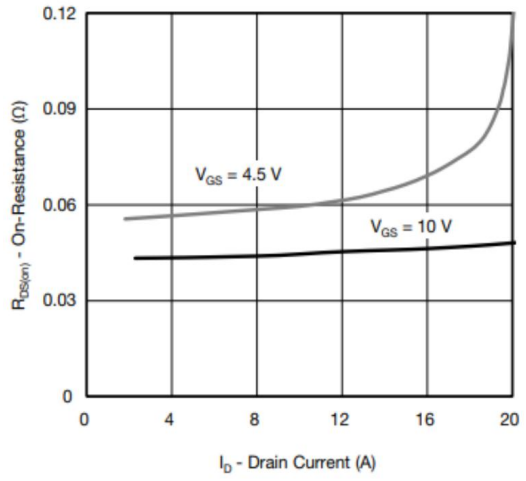
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



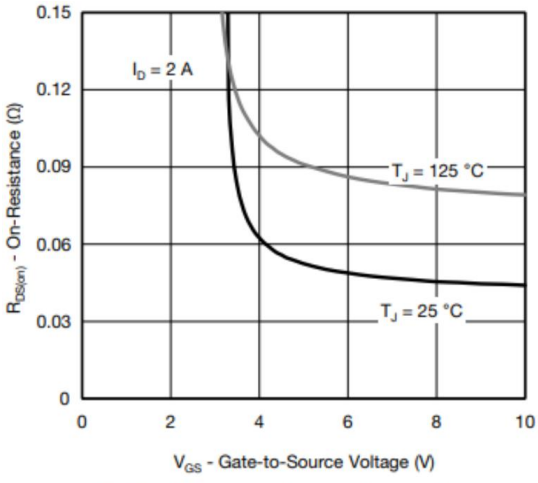
Output Characteristics



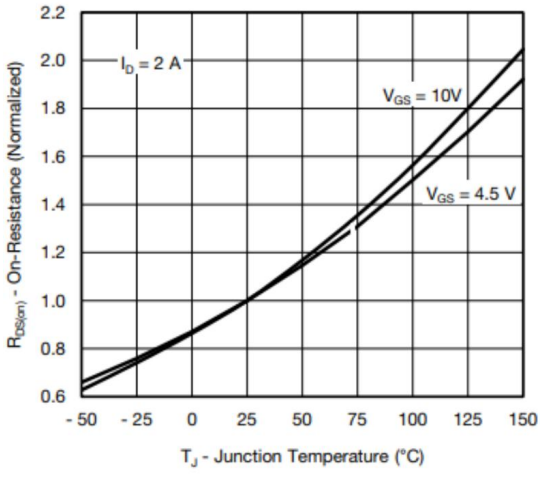
Transfer Characteristics



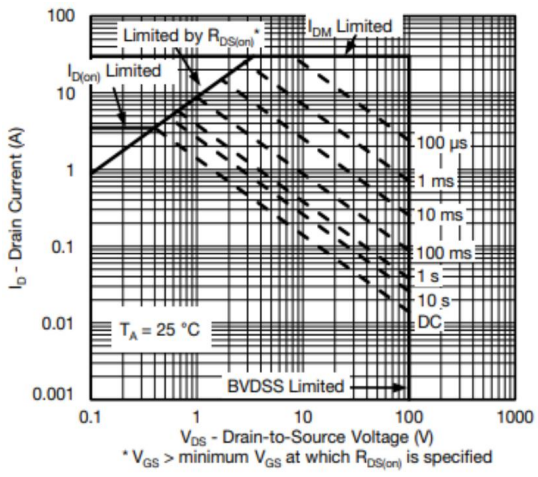
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

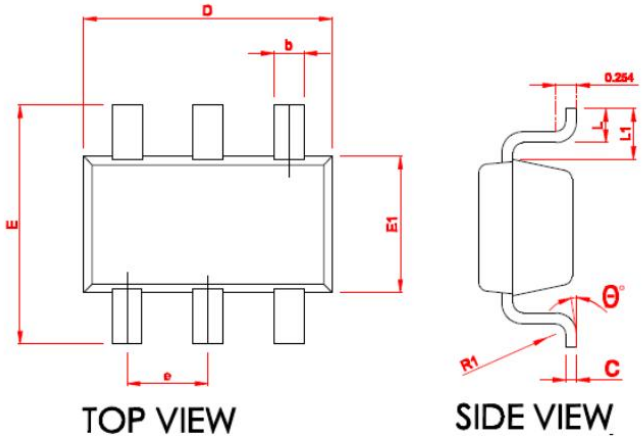


On-Resistance vs. Junction Temperature



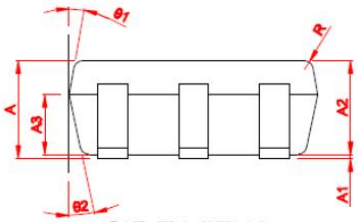
Safe Operating Area, Junction-to-Ambient

➢ Package Information



TOP VIEW

SIDE VIEW



SIDE VIEW

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		
* θ	0	--	8°
θ1	8°	10°	12°
θ2	10°	12°	14°

➢ History Version

V1.0	Product datasheet	2019-12-3
V2.0	Add $R_{DS(ON)}$:VGS=-2.5V	2020-08-28
V2.1	Update Marking	2022-04-13