

**SSC8013GS6**
**P-Channel Enhancement Mode MOSFET**
**➤ Features**

VDS	VGS	RDSON Typ.	ID
-12V	±8V	38mR@-4V5	-3.8A
		47mR@-2V5	
		61mR@-1V8	

**➤ Description**

This device is produced with high cell density DMOS trench technology, which is especially used to minimize on-state resistance. 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.

**➤ Applications**

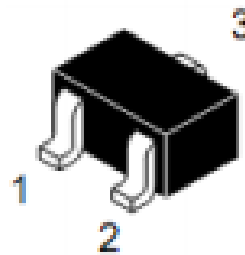
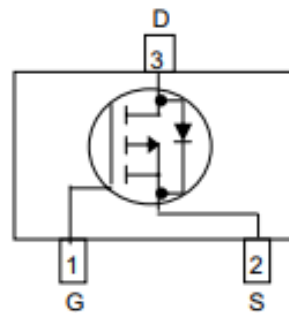
- Load Switch
- Portable Devices
- DCDC conversion

**➤ Ordering Information**

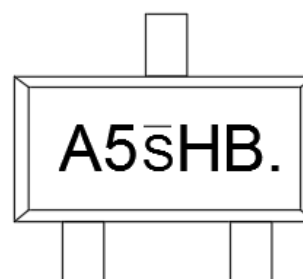
Device	Package	Shipping
SSC8013GS6	SOT-23	3000/Reel

**➤ Pin configuration**

Top View



SOT-23



Marking



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

Symbol	Parameter	Ratings	Unit
$V_{DSS}$	Drain-to-Source Voltage	-12	V
$V_{GSS}$	Gate-to-Source Voltage	$\pm 8$	V
$I_D$	Continuous Drain Current	-3.8	A
$I_{DM}$	Pulsed Drain Current	-20	A
$P_D$	Power Dissipation	0.55	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		227	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		112	

➤ **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	$V_{GS}=0V, I_D=-10\mu\text{A}$	-12			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=-250\mu\text{A}$	-0.45	-0.62	-1.2	V
$R_{DS(on)}$	Drain-Source On- Resistance	$V_{GS}=-4.5V, I_D=-3.5A$		38	60	mR
		$V_{GS}=-2.5V, I_D=-3A$		47	90	
		$V_{GS}=-1.8V, I_D=-2A$		61	100	

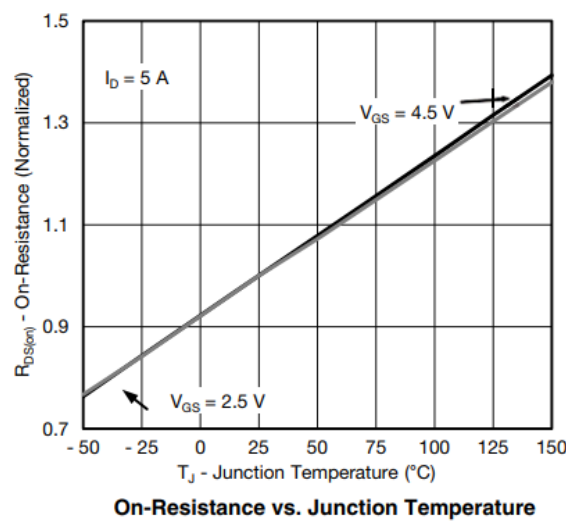
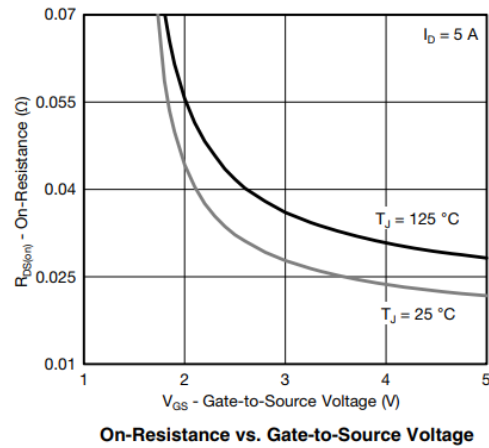
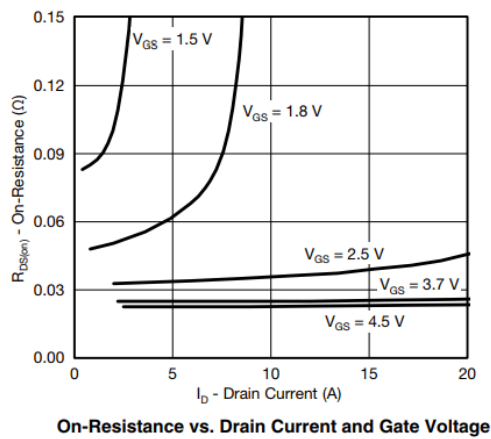
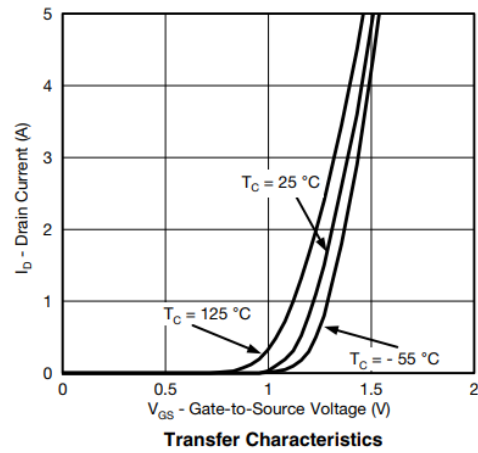
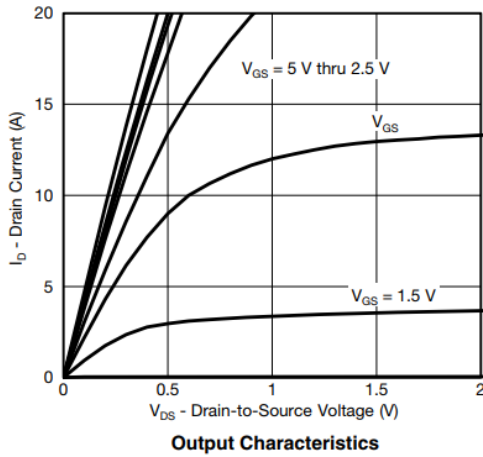


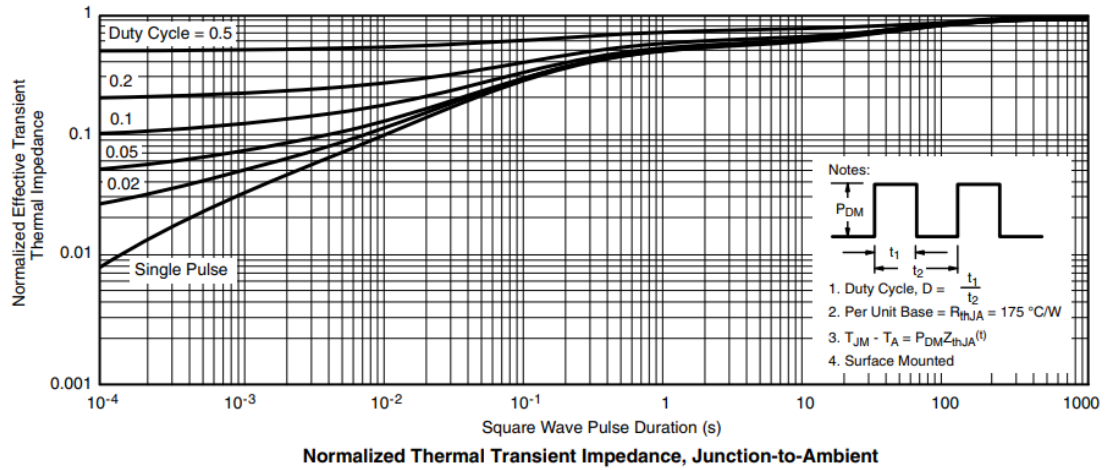
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=-20V, V_{GS}=0V$			-1	$\mu A$
$I_{GSS}$	Gate-Source leak current	$V_{GS}=\pm 8V, V_{DS}=0V$			$\pm 100$	nA
$G_{FS}$	Forward Transconductance	$V_{DS}=-5V, I_D=-3.5A$		9.5		S
$V_{SD}$	Forward Voltage	$V_{GS}=0V, I_S=-1.6A$	-0.5	-0.75	-1.2	V

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$C_{iss}$	Input Capacitance	$V_{DS}=-4V, V_{GS}=0V,$ $F=1MHz$		865		pF
$C_{oss}$	Output Capacitance			273		
$C_{rss}$	Reverse Transfer Capacitance			252		
$T_{D(ON)}$	Turn-on delay time	$V_{GS}=-6V,$ $V_{GEN}=-4.5V, R_L=6R,$ $R_G=6R, I_D=-1.0A$		13	25	ns
$T_{D(OFF)}$	Turn-off delay time			42	70	



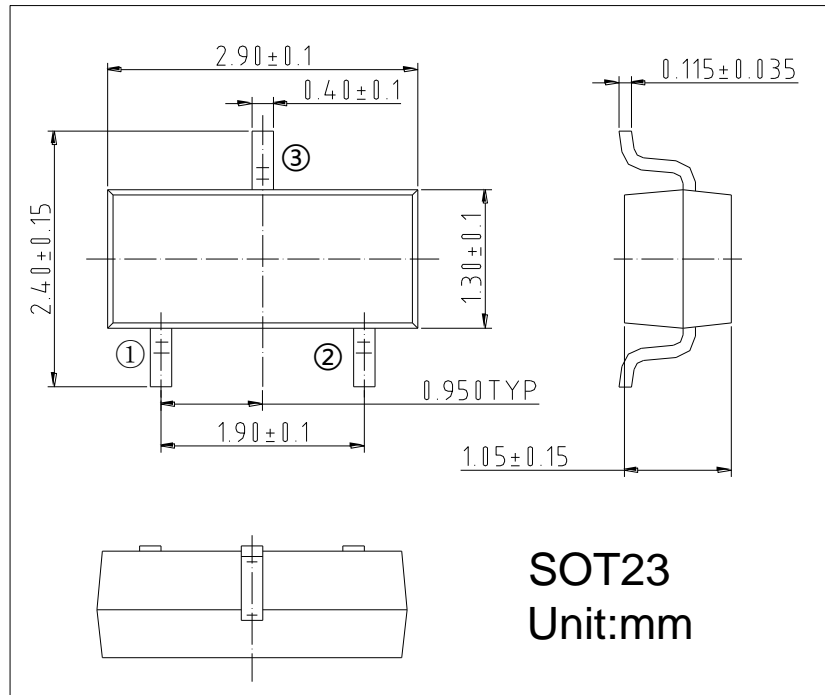
➤ Typical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise noted)







➤ Package Information



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