

SSC8121GS6
P-Channel Enhancement Mode MOSFET
➤ Features

VDS	VGS	RDSON Typ.	ID
-20V	±8V	180mR@-4V5	-1.2A
		210mR@-2V5	
		255mR@-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

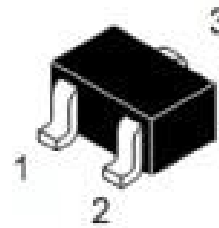
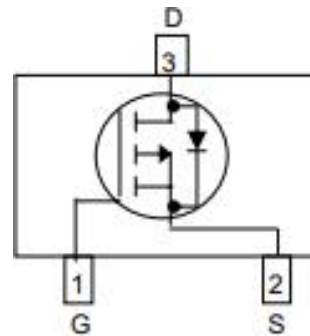
- Load Switch
- Portable Devices
- DCDC conversion

➤ Ordering Information

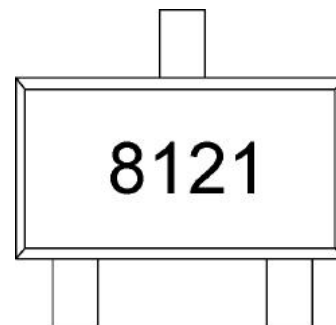
Device	Package	Shipping
SSC8121GS6	SOT23	3000/Reel

➤ Pin configuration

Top view



SOT23



Marking



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

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	-20	V
V_{GSS}	Gate-to-Source Voltage	± 8	V
I_D	Continuous Drain Current	-1.2	A
I_{DM}	Pulsed Drain Current	-5.5	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	$V_{GS}=0\text{V}, I_D=-250\mu\text{A}$	-20			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=-250\mu\text{A}$	-0.45	-0.75	-1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=-4.5\text{V}, I_D=-0.45\text{A}$		180	350	mR
		$V_{GS}=-2.5\text{V}, I_D=-0.35\text{A}$		210	450	
		$V_{GS}=-1.8\text{V}, I_D=-0.25\text{A}$		255	700	

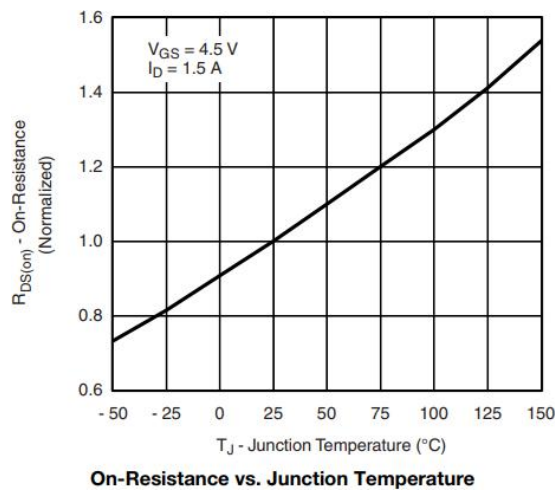
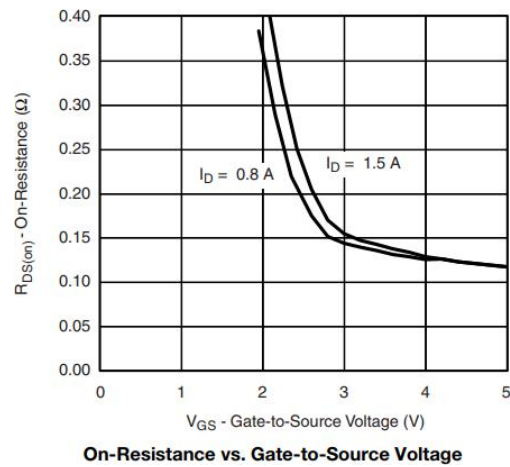
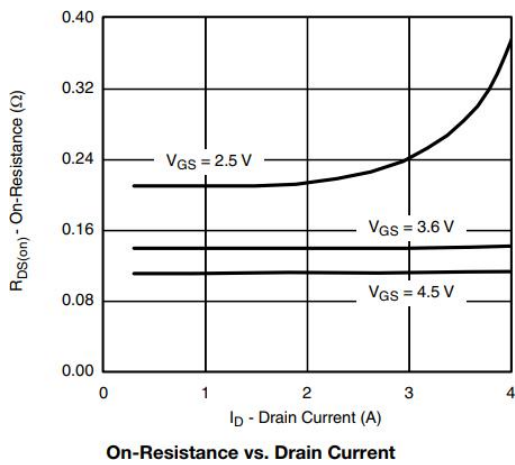
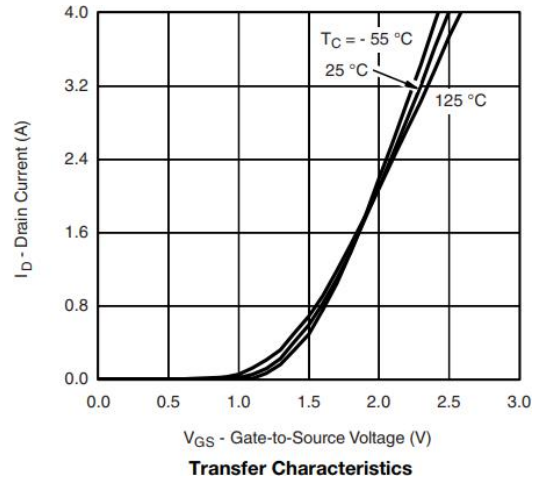
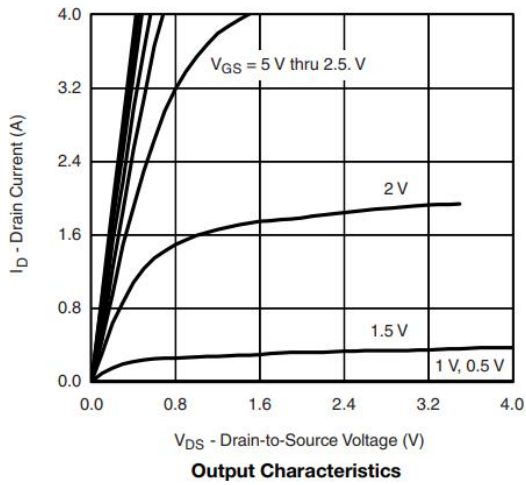


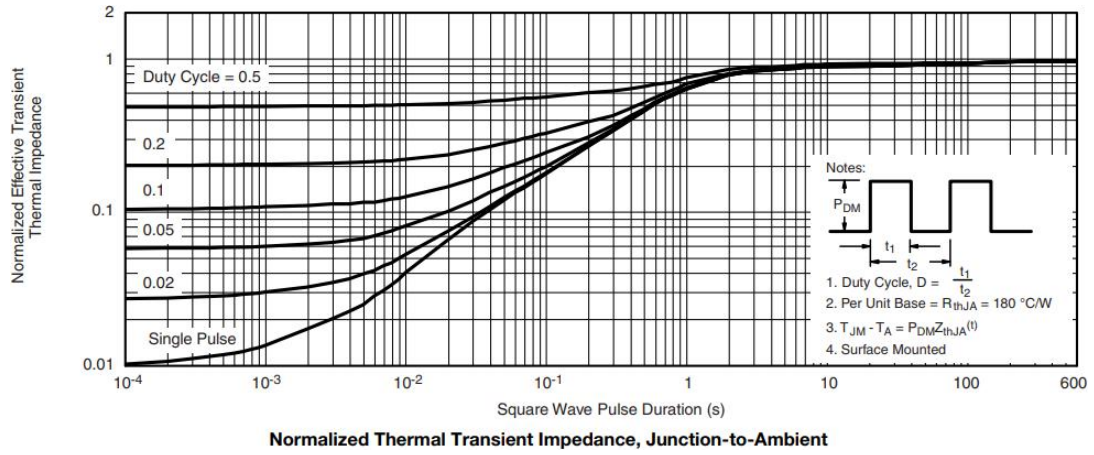
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=-20V, V_{GS}=0V$			-1	μA
I_{GSS}	Gate-Source leak current	$V_{GS}=\pm 8V, V_{DS}=0V$			± 100	nA
G_{FS}	Forward Transconductance	$V_{DS}=-5V, I_D=-1.4A$		6.5		S
V_{SD}	Forward Voltage	$V_{GS}=0V, I_S=-1A$	-0.5		-1.2	V

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
C_{iss}	Input Capacitance	$V_{DS}=-6V, V_{GS}=0V,$ $F=1MHz$		376		pF
C_{oss}	Output Capacitance			187		
C_{rss}	Reverse Transfer Capacitance			78		
$T_{D(ON)}$	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	

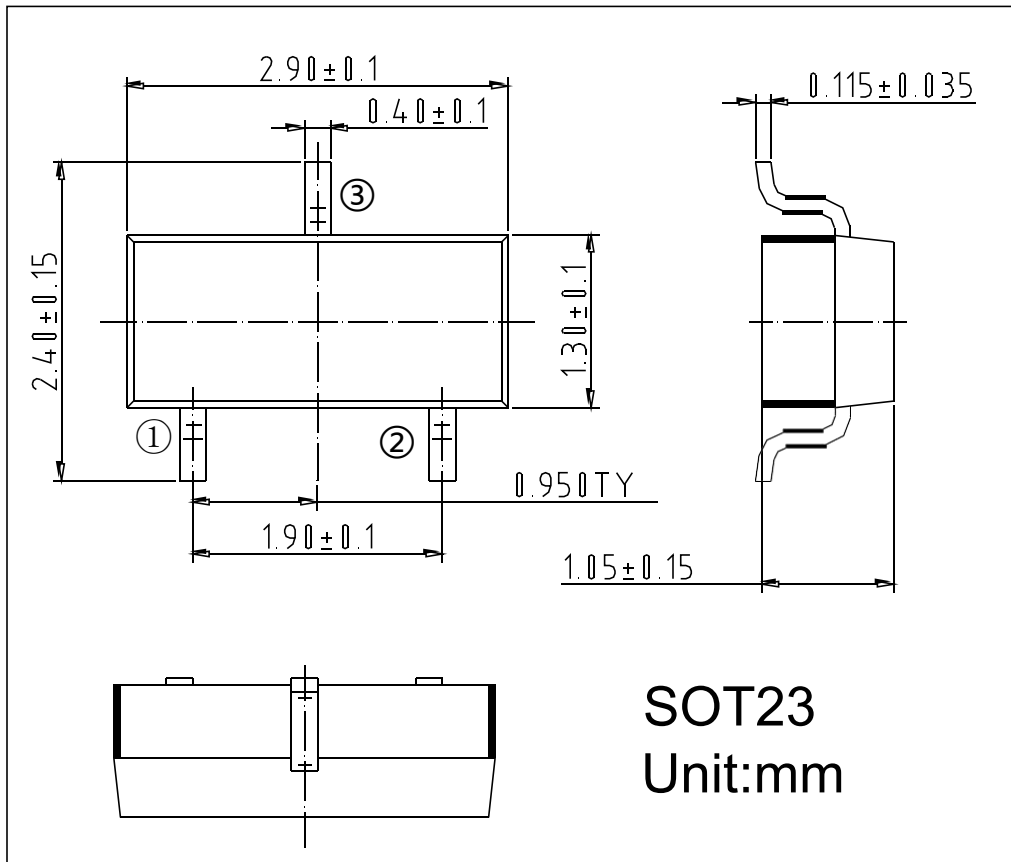


➤ Typical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)





➤ **Package Information**



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