SSC8127ES6

P-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
-20V	±12V	115mR@-4V5	-1.5A
		155mR@-2V5	
		240mR@-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

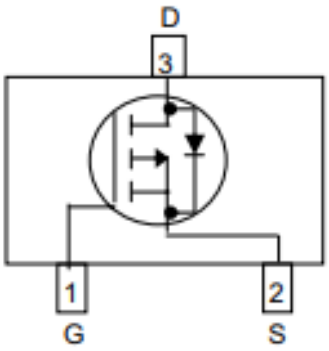
- Load Switch
- Portable Devices
- DCDC conversion

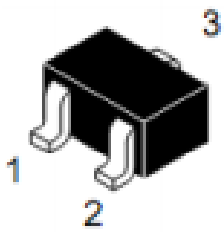
➢ Ordering Information

Device	Package	Shipping
SSC8127ES6	SOT23	3000/Reel

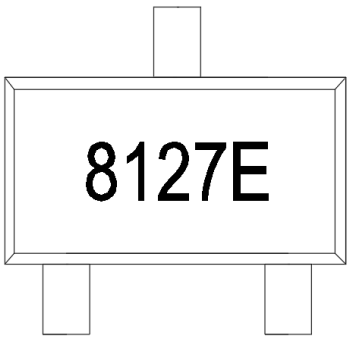
➢ Pin configuration

Top view





SOT23



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 [a]	-1.5	A
I_{DM}	Pulsed Drain Current [b]	-4.5	A
P_D	Power Dissipation [c]	0.6	W
P_{DSM}	Power Dissipation [a]	0.3	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]		430	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		220	

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.

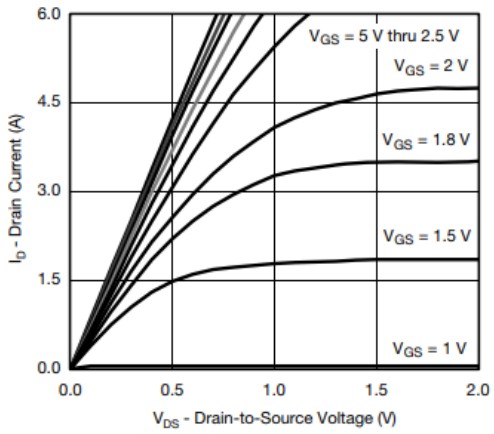
b. Repetitive rating, pulse width limited by junction temperature.

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.

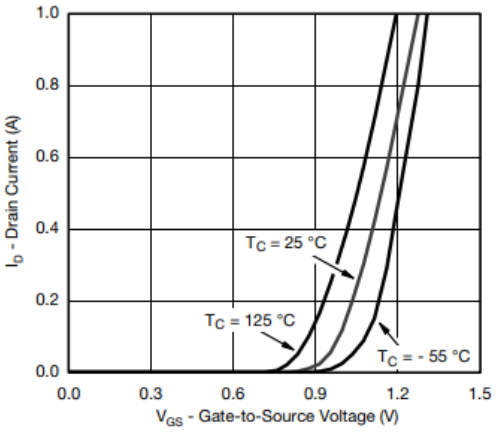
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V,ID=-250uA	-20			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS,ID=-250uA	-0.4	-0.7	-0.9	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=-4.5V,ID=-2A		115	170	mR
		VGS=-2.5V,ID=-1A		155	220	
		VGS=-1.8V,ID=-0.5A		240	360	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=-20V,VGS=0V			-1	uA
I_{GSS}	Gate-Source leak current	VGS=±12V,VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=-5V,ID=-1A		3		S
V_{SD}	Forward Voltage	VGS=0V,IS=-1A			-1.3	V
Ciss	Input Capacitance	VDS=-10V, VGS=0V, f=1MHZ		315		pF
Coss	Output Capacitance			19		
Crss	Reverse Transfer Capacitance			15		
Qg	Total Gate Charge	VGS=-4.5V, VDS=10V, ID=1A		4.3		nC
Qgs	Gate Source Charge			1.8		
Qgd	Gate Drain Charge			1.5		
$T_{D(ON)}$	Turn-on delay time	VGS=4.5V, VDS=10V, RG=6R, RL=20R		5		ns
$T_{D(OFF)}$	Turn-off delay time			29		

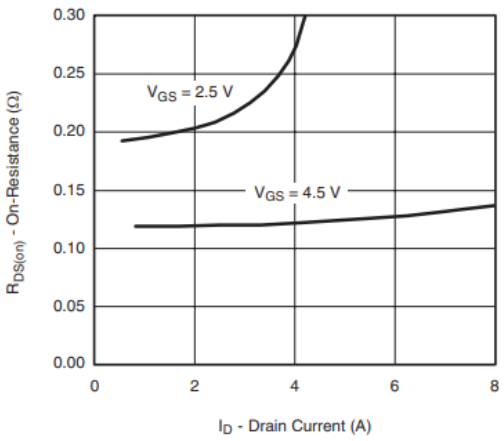
➢ Typical Characteristics(TA=25℃ unless otherwise noted)



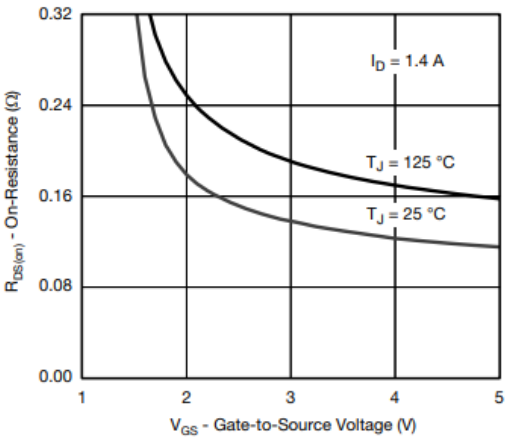
Output Characteristics



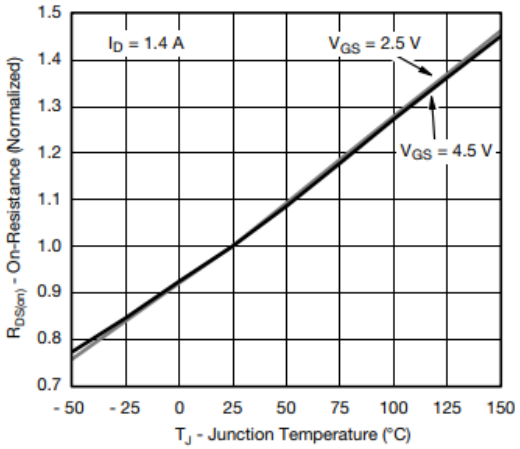
Transfer Characteristics



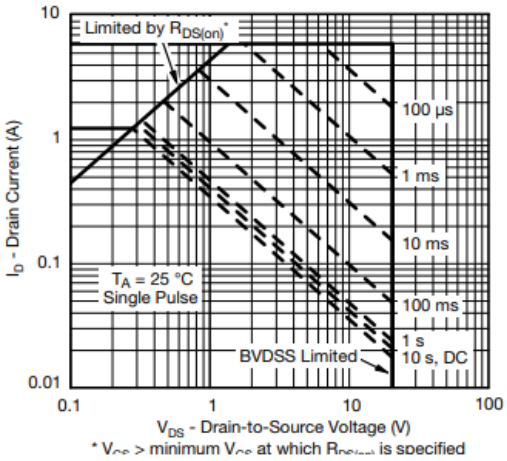
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

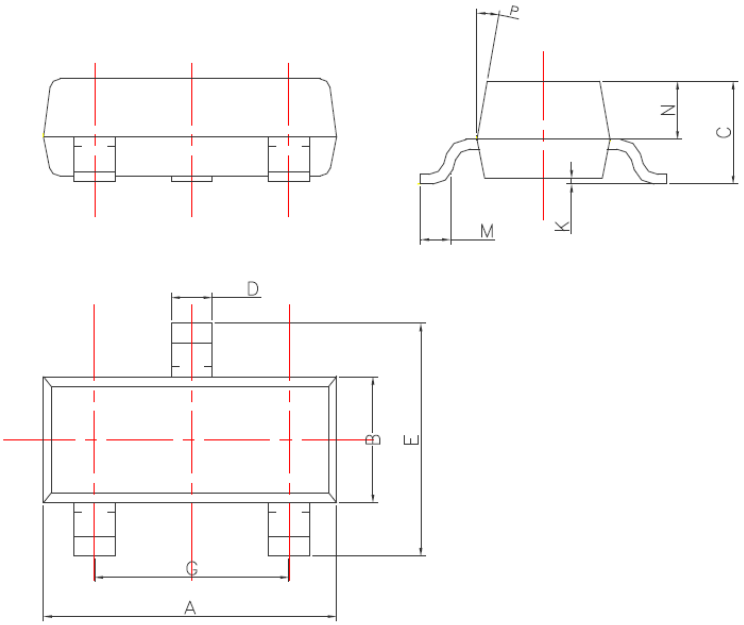


On-Resistance vs. Junction Temperature

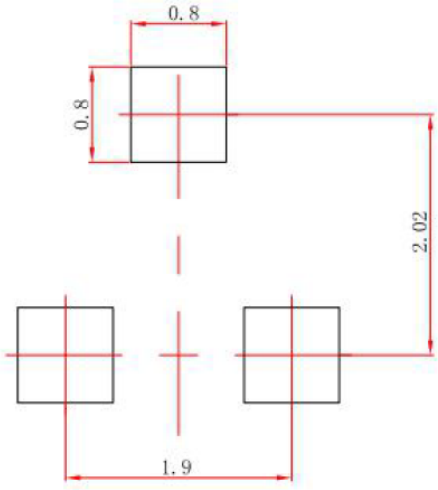


Safe Operating Area, Junction-to-Ambient

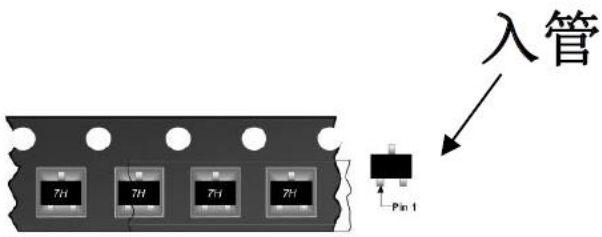
➢ Package Information



DIM	MILLIMETERS
A	2.85~3.04
B	1.30±0.10
C	1.00±0.10
D	0.45±0.05
E	2.25~2.55
G	1.90±0.1
K	0.00−0.10
M	0.20 MIN
N	0.60±0.10
P	7±2°



单位：mm
公差：±0.05mm



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