SSC8226GS8

N-Channel Enhancement Mode MOSFET with ESD Protection

➢ Features

VDS	VGS	RDSON Typ.	ID	ESD
20V	±8V	210mR@4V5 450mR@2V5	1.2A	2K

➢ Description

This device is a N-Channel enhancement mode MOSFET which is produced with high cell density and DMOS trench technology. This device particularly suits low voltage applications, especially for battery powered circuits, the tiny and thin outline saves PCB consumption.

➢ Applications

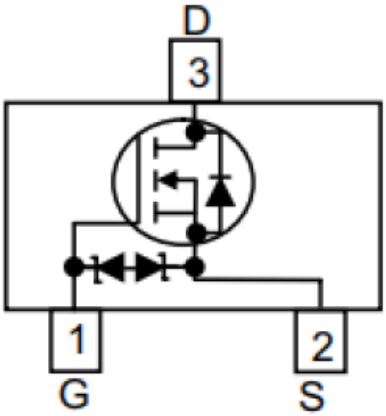
- Replace Digital Transistor
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching cell Phones

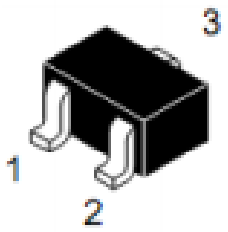
➢ Ordering Information

Device	Package	Shipping
SSC8226GS8	SOT523	3000/Reel

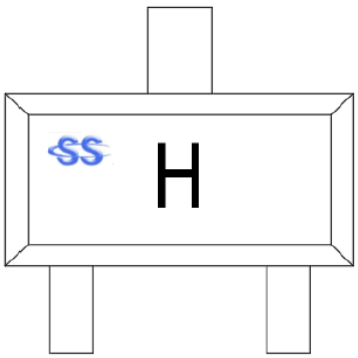
➢ Pin configuration

Top view





SOT523



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	±8	V
I_D	Continuous Drain Current [a]	1.2	A
I_{DM}	Pulsed Drain Current [b]	3.6	A
P_D	Power Dissipation [c]	0.37	W
P_{DSM}	Power Dissipation [a]	0.22	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]		567	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		333	

Note:

a. The value of RθJA is measured with the device mounted on 1 in^2 FR-4 board with 2oz.copper,in a still air environment with TA=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.

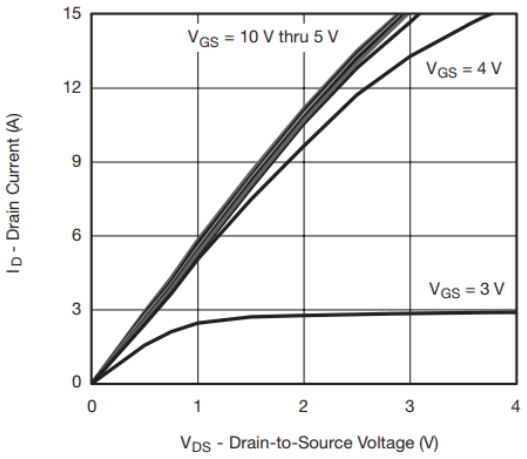
b. Repetitive rating, pulse width limited by junction temperature.

c. The power dissipation PD is based on TJ(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.

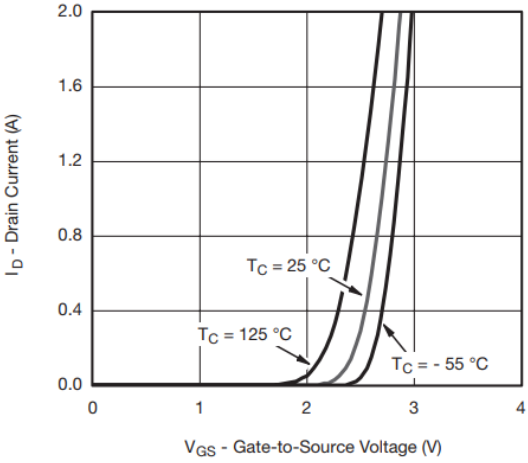
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

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	1	1.5	2	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=4.5V,ID=0.5A		210	480	mR
		VGS=2.5V,ID=0.5A		450	700	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=20V,VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±8V,VDS=0V			±10	uA
G_{FS}	Forward Transconductance	VDS=10V,ID=0.4A		1		S
V_{SD}	Forward Voltage	VGS=0V,IS=0.5A			1.3	V
Ciss	Input Capacitance	VDS=10V, VGS=0V, F=100KHZ		89		pF
Coss	Output Capacitance			19		
Crss	Reverse Transfer Capacitance			11		
$T_{D(ON)}$	Turn-on delay time	VGS=4.5V, VDD=10V, RG=6R, ID=0.55A		21		ns
$T_{D(OFF)}$	Turn-off delay time			680		

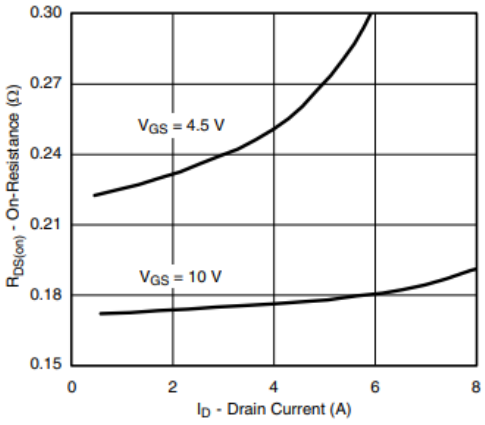
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



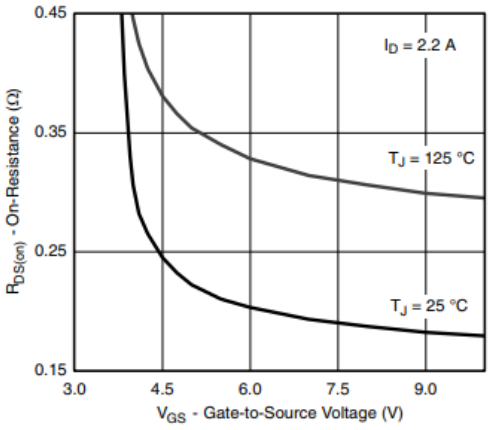
Output Characteristics



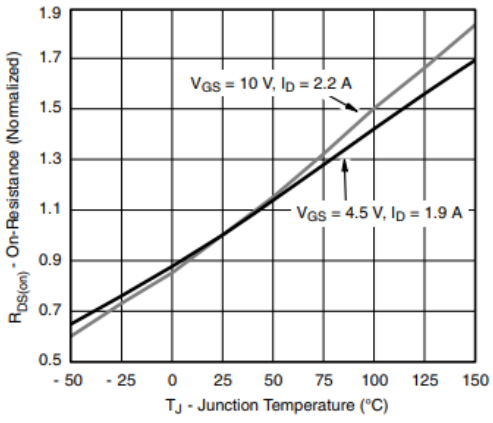
Transfer Characteristics



On-Resistance vs. Drain Current and Gate Voltage



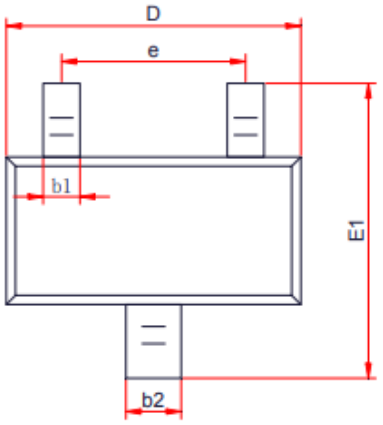
On-Resistance vs. Gate-to-Source Voltage



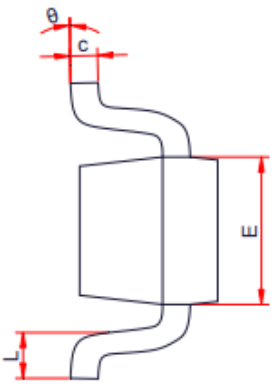
On-Resistance vs. Junction Temperature

➢ Package Information

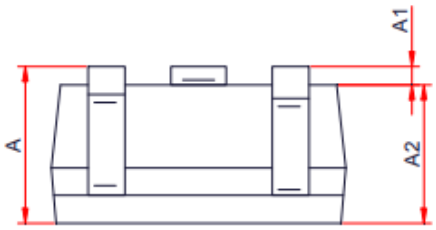
SOT-523



TOP VIEW



SIDE VIEW



SIDE VIEW

Symbol	Dimension in Millimeters	
	Min.	Max.
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
c	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500 Typ.	
e1	0.900	1.100
L	0.400 Ref.	
L1	0.260	0.460
θ	0°	8°

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