SSC8132GS9

N-Channel Enhancement Mode MOSFET with ESD Protection

➢ Features

VDS	VGS	RDSON Typ	ID
30V	±20V	550mΩ@5V0	0.5A
		680mΩ@2V75	

➢ 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

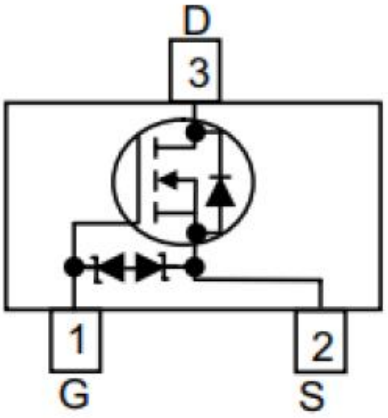
- Replace Digital Transistor
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching cell Phones

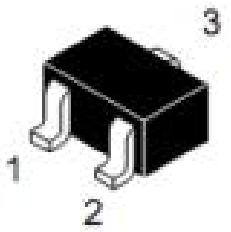
➢ Ordering Information

Device	Package	Shipping
SSC8132GS9	SOT723	8000/Reel

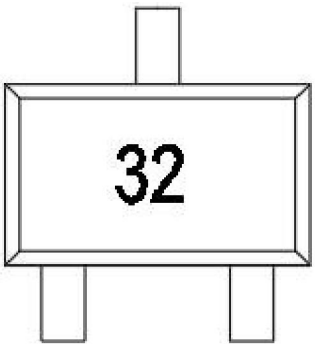
➢ Pin configuration

Top view





SOT723



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		±20	V
I_D	Continuous Drain Current [a]		0.5	A
I_{DM}	Pulsed Drain Current [b]		2	A
P_D	Power Dissipation [a]	TC=25℃	0.25	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]		416	℃/W

Note:

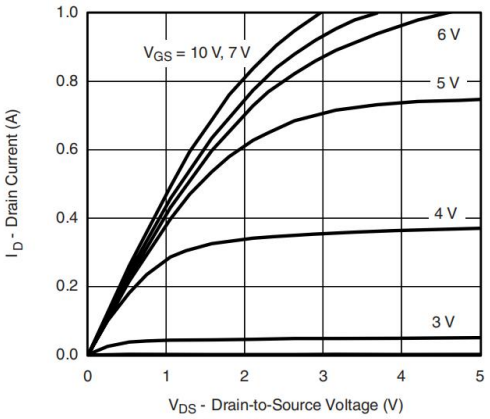
a. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in^2 FR-4 board with 2oz.copper,in a still air environment with T_A=25℃.The value in any given application depends on the user is specific board design. The current rating is based on the t≤ 10s thermal resistance rating.

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

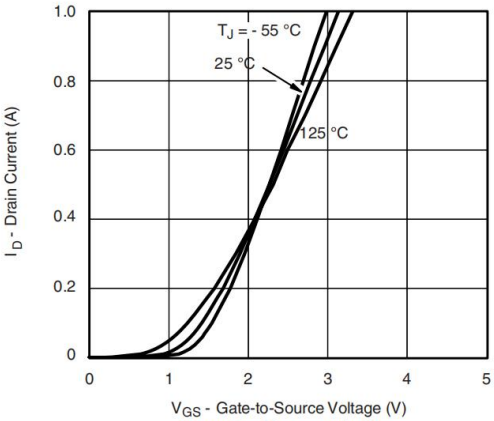
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

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	0.5	1.0	1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=5.0V,ID=0.5A		560	650	mΩ
		VGS=2.75V,ID=0.3A		680	750	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=30V,VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±20V,VDS=0V			±10	uA
G_{FS}	Transconductance	VDS=25V, ID=0.2A, f =1.0kHz	100			mS
V_{SD}	Forward Voltage	VGS=0V,IS=0.2A		0.8	1.4	V
Ciss	Input Capacitance	VDS=15V, VGS=0V, f=1MHz		45		pF
Coss	Output Capacitance			12.8		
Crss	Reverse Transfer Capacitance			4.5		
Qg	Total Gate charge	VDS=25V,VGS=5V,ID=0.2A		0.8		nC
Qgs	Gate to Source charge			0.1		
Qgd	Gate to Drain charge			0.53		
$T_{D(ON)}$	Turn-on delay time	VGEN=5.0V, VDS=30V, RG=3Ω, ID=0.2A			20	ns
$T_{D(OFF)}$	Turn-off delay time				20	

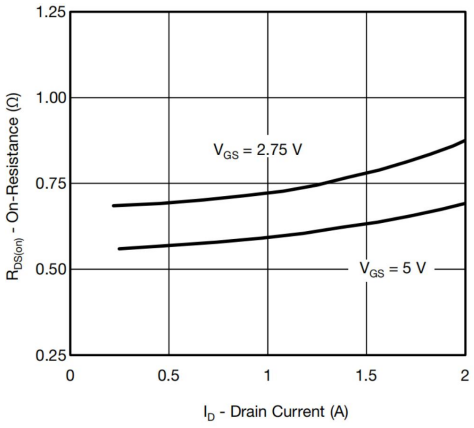
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



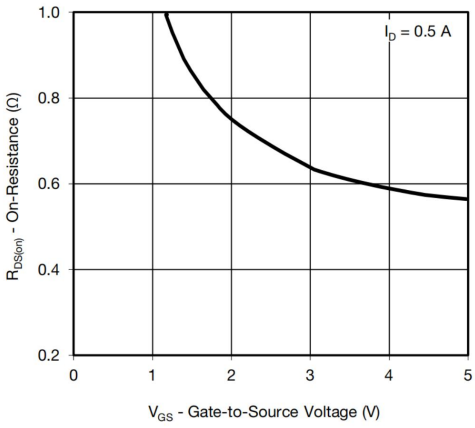
Output Characteristics



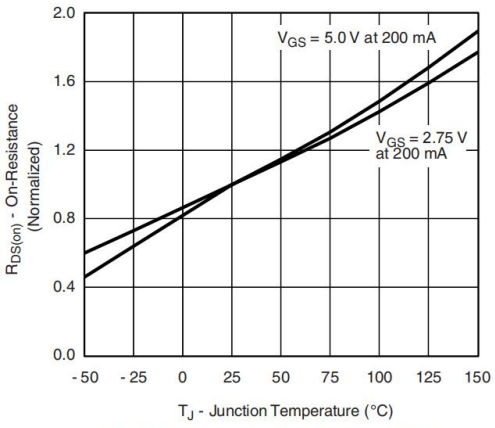
Transfer Characteristics



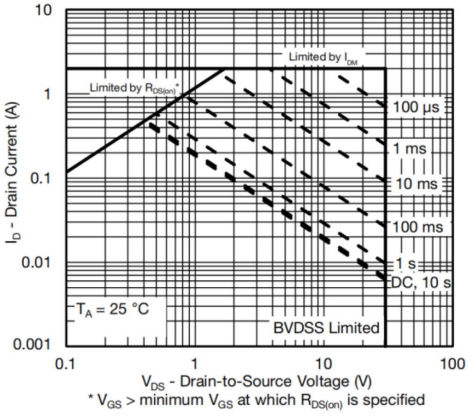
On-Resistance vs. Drain Current



On-Resistance vs. Gate-to-Source Voltage



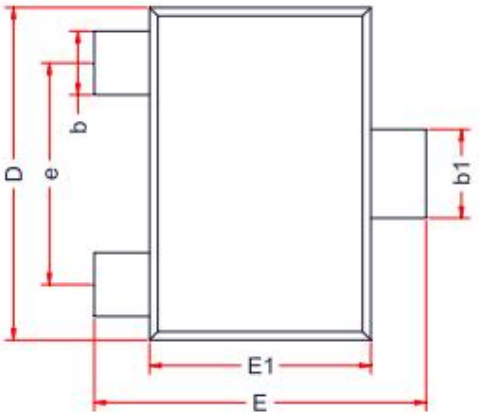
On-Resistance vs. Junction Temperature



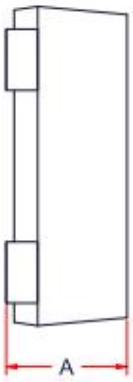
Safe Operating Area, Junction-to-Ambient

➢ Package Information

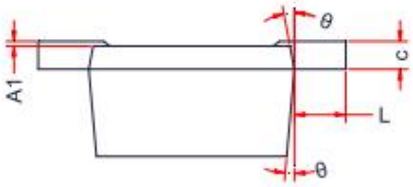
SOT-723



TOP VIEW



SIDE VIEW



SIDE VIEW

Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.43	-	0.55
A1	0.00	-	0.05
c	0.08	0.13	0.18
b1	0.27	-	0.37
b	0.17	-	0.27
L1	0.15	0.20	0.25
D	1.15	1.20	1.25
E	1.15	1.20	1.25
E1	0.75	0.80	0.85
e	0.80 Ref.		
θ	7 ° Ref.		

DISCLAIMER

SSCSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN.SSCSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G. OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.