



## SSC8814CS6A

Dual N-channel Power MOSFET

### Features

V <sub>DS</sub>	V <sub>GS</sub>	R <sub>SSON Typ.</sub>	ID	ESD
12V	±8V	10mR/4.5V	8	800V

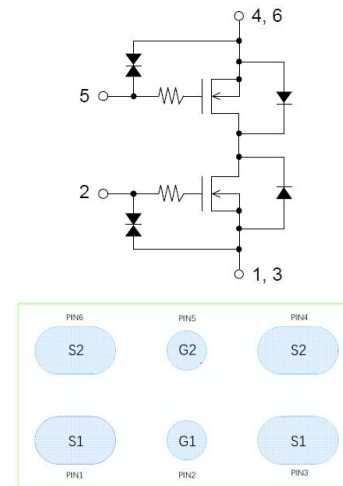
### Description

The SSC8814CS6A is the Dual N-Channel enhancement MOSFET. Uses advanced trench and CSP package technology design to provide excellent R<sub>ON</sub> with low gate charge.

### Application

- Power Switch
- Load Switch
- One-cell Lion Battery

### Pin Configuration



Bottom View

### Ordering Information

Device	Package	Shipping
SSC8814CS6A	CSP	3K/Reel

### Absolute Maximum Ratings(TA=25°C unless otherwise noted)

Symbol	Parameter	Ratings	Unit
V <sub>SS</sub>	Source -to-Source Voltage	12	V
V <sub>GS</sub>	Gate-to-Source Voltage	±8	
I <sub>D</sub>	Continuous Source Current <sup>A</sup>	8	A
I <sub>DM</sub>	Pulsed Source Current <sup>B</sup>	24	
P <sub>D</sub>	Power Dissipation <sup>C</sup>	1	W
T <sub>J</sub>	Operation junction temperature	150	°C
T <sub>STG</sub>	Storage temperature range	-55~150	
R <sub>θJA</sub>	Junction-to-Ambient Thermal Resistance <sup>C</sup>	125	°C/W



## SSC8814CS6A

✚ Electronics Characteristics (TA=25°C unless otherwise noted)

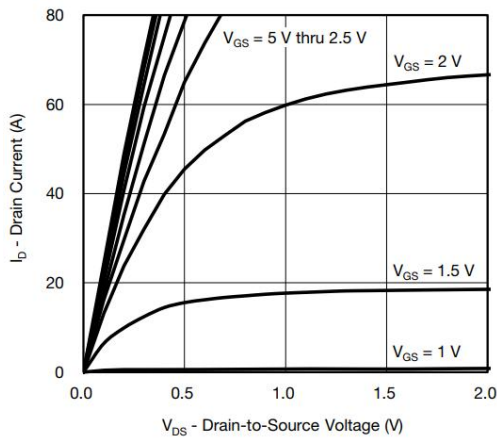
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)SSS}$	Source to Source Breakdown Voltage	VGS=0V , IS=1mA	12			V
$V_{GS(TH)}$	Gate Threshold Voltage	VSS=6V , IS=1mA	0.4	0.7	1.2	V
$R_{SS}$	Source to Source on Resistance	VGS=4.5V , IS=4A		10	14	mR
		VGS=2.5V , IS=2A		15	22	
$I_{SSS}$	Zero Gate Voltage Current	VSS=10V , VGS=0V			1	uA
$I_{GSS}$	Gate Source Leak Current	VGS=±8V , VSS=0V			±10	uA
$V_{SS}$	Forward Voltage	ISS=2A		0.7	1.3	V
$C_{ISS}$	Input Capacitance <sup>D</sup>	VGS=0V		2700		pF
$C_{OSS}$	Output Capacitance <sup>D</sup>	VSS=10V		450		
$C_{RSS}$	Transfer Capacitance <sup>D</sup>	f=1MHz		290		
$T_{D(ON)}$	Turn-on delay time	VSS=6V IS=2A VGS=4V		4		us
$T_R$	Rise time			5		
$T_{D(OFF)}$	Turn-off delay time			13		
$T_F$	Fall time			8		
$Q_G$	Total Gate Charge <sup>D</sup>	VSS=6V, IS=2A, VGS=4V		26		nC

**Note:**

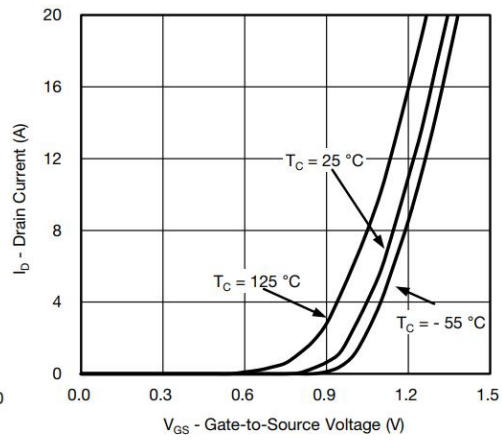
- A. The current rating is based on the  $t \leq 10s$  thermal resistance rating.
- B.  $t = 10\mu s$  , Duty Cycle  $\leq 1\%$ .
- C. Surface mounted on ceramic substrate.
- D. Guaranteed by design, not subject to production testing.



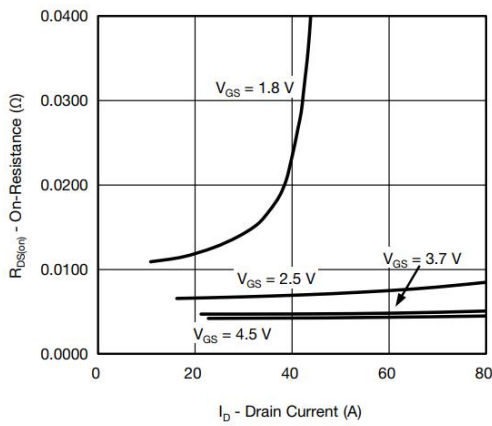
Single Typical Characteristics (TA=25°C unless otherwise noted)



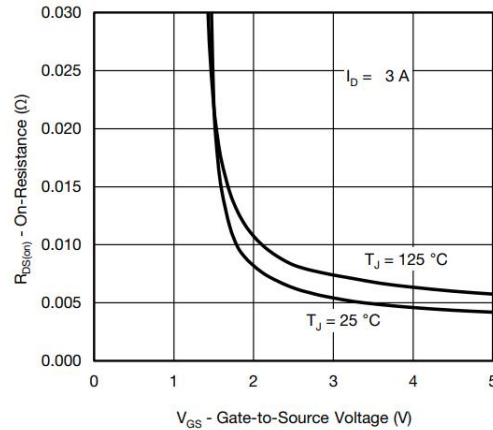
Output Characteristics



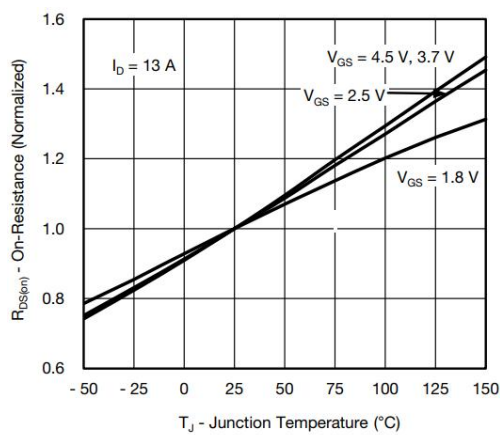
Transfer Characteristics



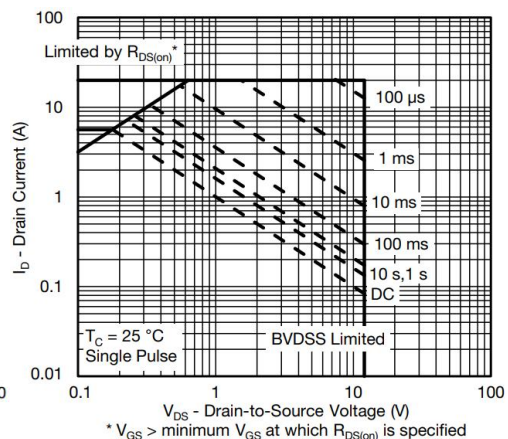
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage



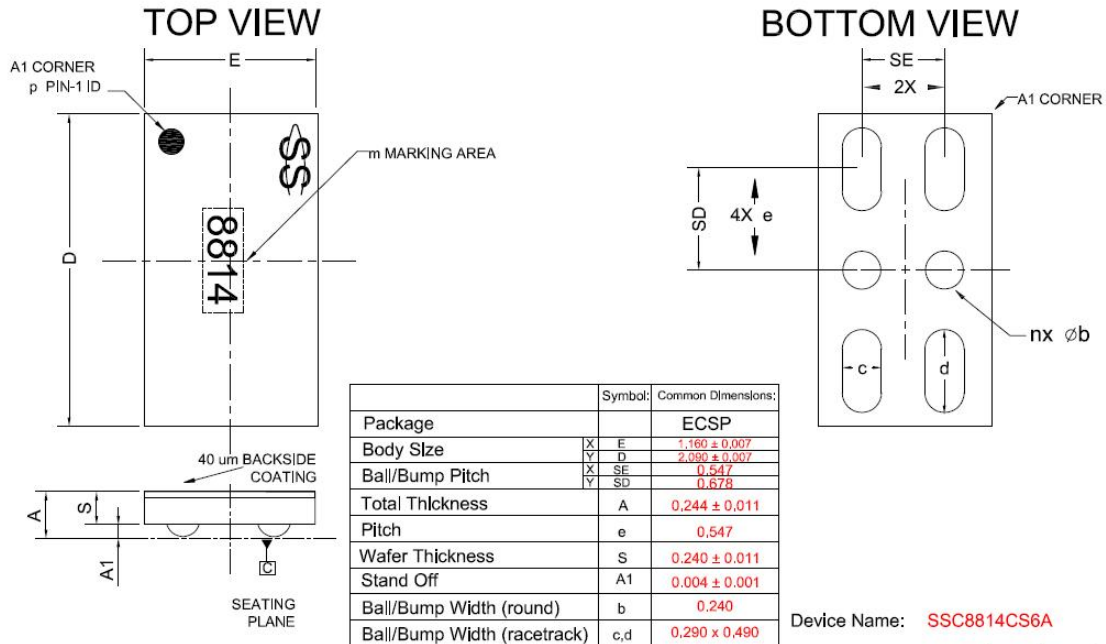
On-Resistance vs. Junction Temperature



Safe Operating Area, Junction-to-Ambient



Package Information



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