



## SSC8222GN2

### N-Channel Enhancement Mode MOSFET

#### ➤ Features

VDS	VGS	RDSON Typ.	ID
20V	±12V	5.6mR@4V5	15A
		7.5mR@2V5	
		13mR@1V8	

#### ➤ Description

- Advance trench process technology
- High density cell design for ultralow on-resistance
- High power and current handling capability
- Fully characterized avalanche voltage and current

#### ➤ Applications

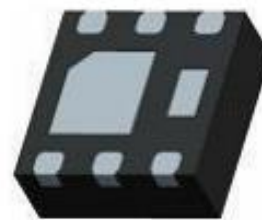
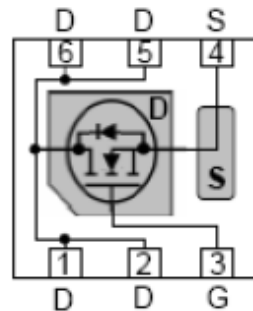
- Load Switch
- Li-ion battery protection

#### ➤ Ordering Information

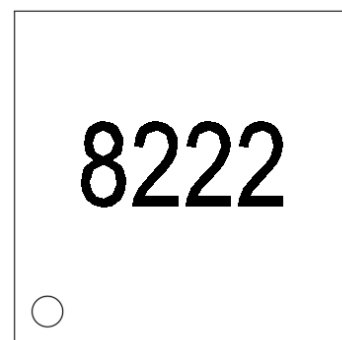
Device	Package	Shipping
SSC8222GN2	DFN2x2	3000/Reel

#### ➤ Pin configuration

Top view



Bottom View



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	$\pm 12$	V
$I_D$	Continuous Drain Current	15	A
$I_{DM}$	Pulsed Drain Current	50	A
$P_D$	Power Dissipation	2.8	W
$T_J$	Operation junction temperature	-25 to 85	$^{\circ}\text{C}$
$T_{STG}$	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		61	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		43	

➤ **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	$V_{GS}=0V, I_D=250\mu\text{A}$	20			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.5	0.7	1	V
$R_{DS(on)}$	Drain-Source On- Resistance	$V_{GS}=4.5V, I_D=10A$		5.6	8	mR
		$V_{GS}=2.5V, I_D=5A$		7.5	10	
		$V_{GS}=1.8V, I_D=2.5A$		13	15	

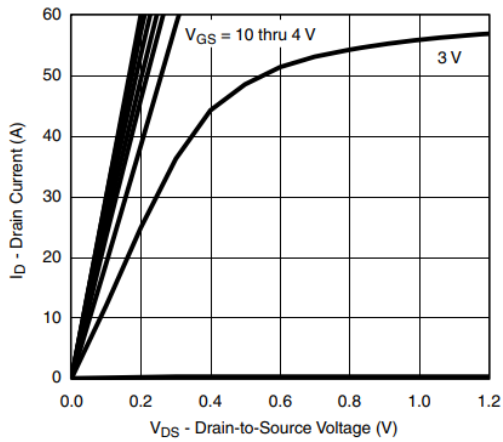


Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=16V, V_{GS}=0V$			1	$\mu A$
$I_{GSS}$	Gate-Source leak current	$V_{GS}=\pm 12V, V_{DS}=0V$			$\pm 100$	nA
$G_{FS}$	Forward Transconductance	$V_{DS}=5V, I_D=4.5A$		8		S
$V_{SD}$	Forward Voltage	$V_{GS}=0V, I_S=0.5A$		0.8	1.3	V

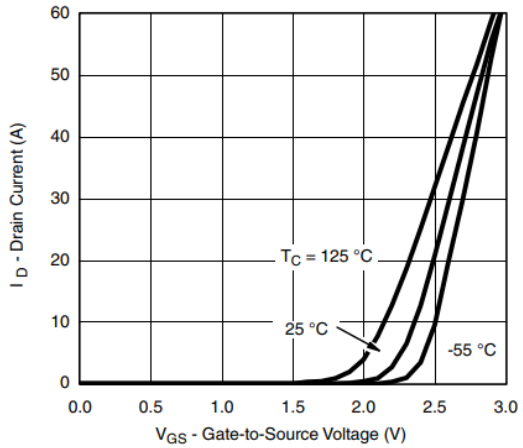
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$C_{iss}$	Input Capacitance	$V_{DS}=8V, V_{GS}=0V,$ $F=1MHz$		1900		pF
$C_{oss}$	Output Capacitance			430		
$C_{rss}$	Reverse Transfer Capacitance			140		
$T_{D(ON)}$	Turn-on delay time	$V_{GEN}=4.5V, R_L=10R,$ $V_{DS}=10V, R_G=6R, I_D=1A$			20	ns
$T_{D(OFF)}$	Turn-off delay time				70	



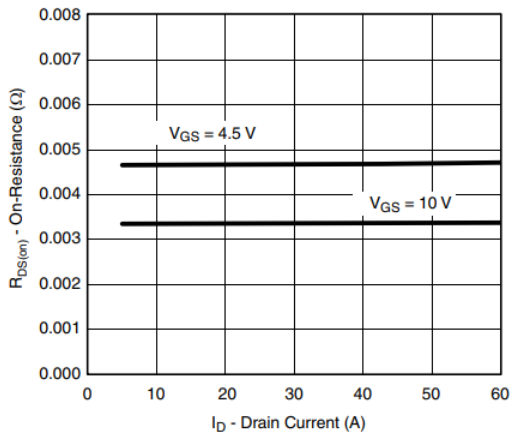
➤ **Typical Characteristics**( $T_A=25^\circ\text{C}$  unless otherwise noted)



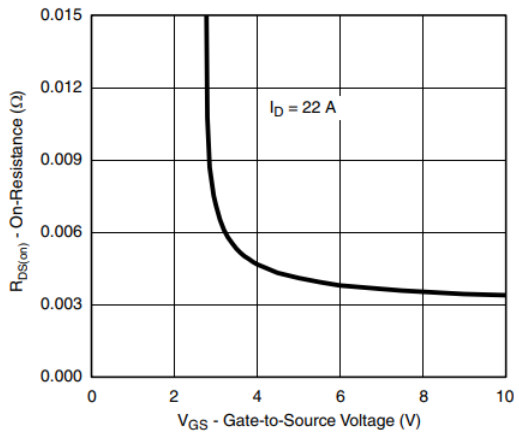
**Output Characteristics**



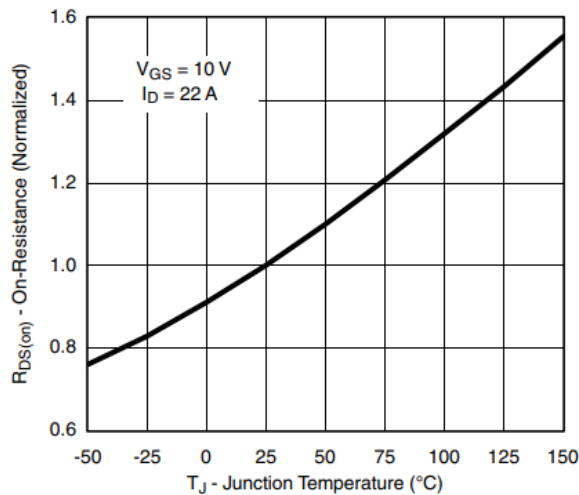
**Transfer Characteristics**



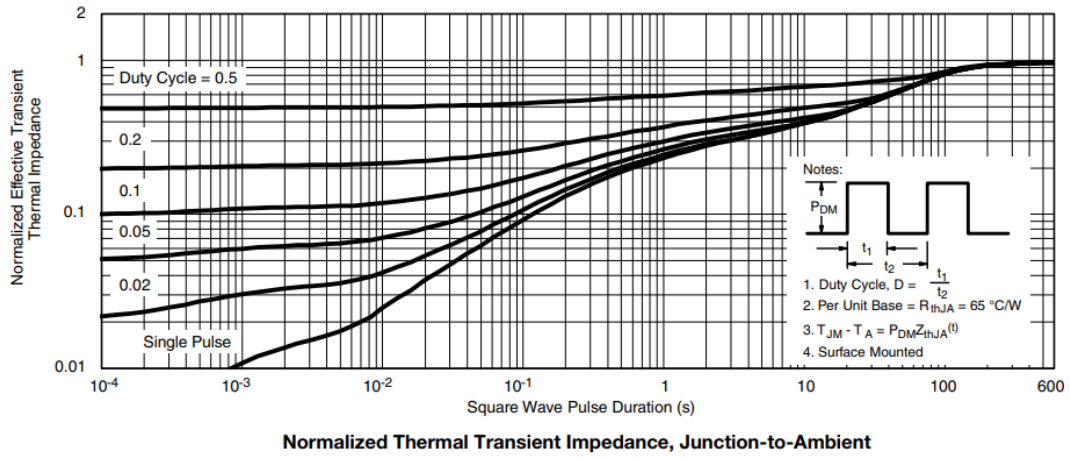
**On-Resistance vs. Drain Current**



**On-Resistance vs. Gate-to-Source Voltage**

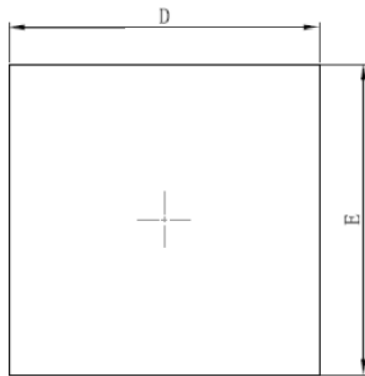


**On-Resistance vs. Junction Temperature**

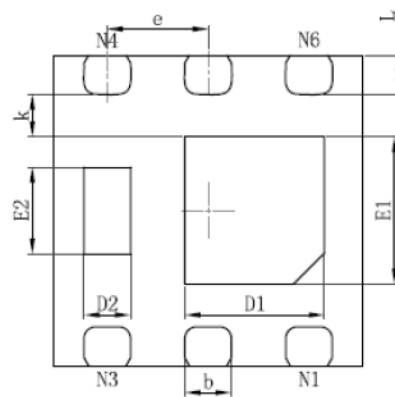




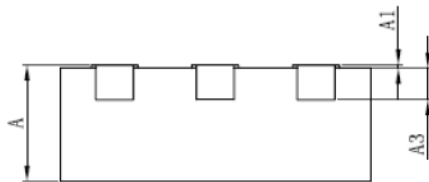
➤ Package Information



TOP VIEW



BOTTOM VIEW



SIDE VIEW

DFN2x2-6L

Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.700	0.800
A1	0.000	0.050
A3	0.203REF.	
D	1.924	2.076
E	1.924	2.076
D1	0.800	1.000
E1	0.850	1.050
D2	0.200	0.400
E2	0.460	0.660
k	0.200MIN.	
b	0.250	0.350
e	0.650TYP.	
L	0.174	0.326



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