

P-Channel Enhancement Mode MOSFET

Features

VDS	VGS	RDSon TYP	ID
-20V	±12V	21mR@-4V5	-6.5A
		26mR@-2V5	
		35mR@-1V8	
		45mR@-1V5	

Applications

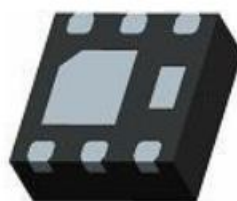
- Load Switch
- Portable Devices
- DCDC conversion
- Charging
- Driver for Relay,Solenoid,Motor,LED etc.

Pin Configuration

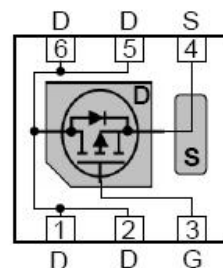
Top View

General Description

This device is produced with high cell density DMOS trench technology, Uses advanced trench technology and design to provide excellent RDS (ON) with low gate charge. 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. Excellent thermal and electrical capabilities.

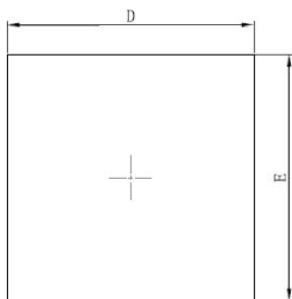


DFN2*2-6L

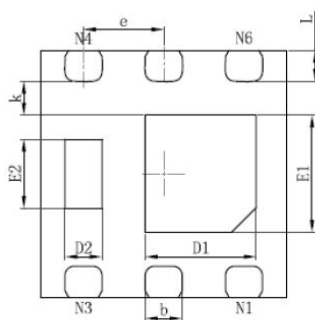


D: Drain; G: Gate; S: Source

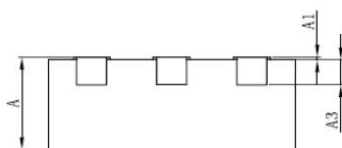
Package Information



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



SSC8029GN2

● Absolute Maximum Ratings @T_A=25°C unless otherwise noted

Parameter		Symbol	10S	Steady State	Unit
Drain-Source Voltage		V _{DSS}	-20		V
Gate-Source Voltage		V _{GSS}	±12		V
Drain Current (Continuous) ¹	25°C	I _{D25}	-6.5	-5.6	A
	100°C	I _{D70}	-5.2	-4.4	
Power Dissipation ¹	25°C	P _{D25}	2.8	1.4	W
	100°C	P _{D70}	1.2	0.9	
Drain Current (Pulse)		I _{DM}		-24	A
Operating Temperature/ Storage Temperature		T _J /T _{STG}		-55~150	°C

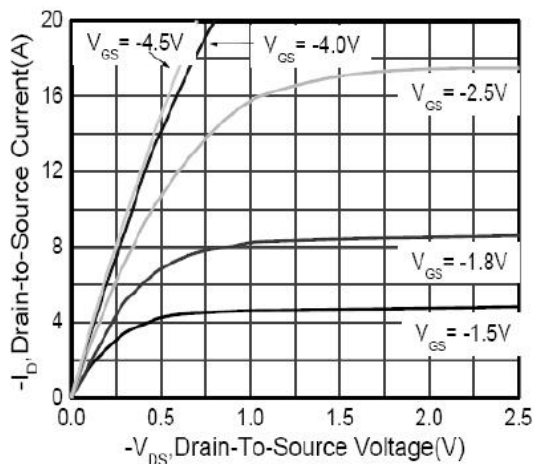
● Electrical Characteristics @T_A=25°C unless otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =-250uA	-20	--	--	V
Drain Cut-off Current	I _{DSS}	V _{DS} = -20 V , V _{GS} = 0V	--	--	-1	uA
Gate-Source Leakage Current	I _{GSS}	V _{GS} = ±12 V , V _{DS} = 0V	--	--	±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(th)}	I _D = -250 uA , V _{DS} = V _{GS}	-0.45	-0.55	-0.80	V
Drain-Source On-state Resistance	R _{DS(on)}	V _{GS} = -4.5V ,I _D = -5.5A	--	21	29	mR
		V _{GS} = -2.5V ,I _D = -2.5A		26	39	mR
		V _{GS} = -4.5V ,I _D = -1.8A		35	60	mR
		V _{GS} = -2.5V , I _D = -1.5A	--	45	90	mR
Forward Transconductance	g _{FS}	V _{DS} = -5V, I _D = -5.5A	--	23	--	S
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{iSS}	V _{DS} = -10V , V _{GS} = 0V f = 1 MHz	--	1970	--	pF
Output Capacitance	C _{oSS}		--	205	--	pF
Feedback Capacitance	C _{rSS}		--	195	--	pF
SWITCHING CHARACTERISTICS						
Turn-on Delay Time	t _{d (on)}	V _{DD} = -10V , I _D = -6.5A, V _{GS} =	--	16		ns
Turn-off Delay Time	t _{d (off)}	-4.5V, R _G = 6R	--	78		ns
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Drain-Source Diode Forward Voltage	V _{SD}	I _S = -1 A, V _{GS} = 0V		-0.75	-1.5	V

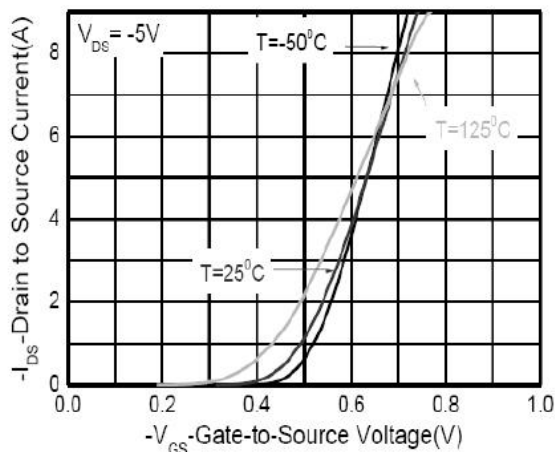
Notes:

1. Surface mounted on FR-4 Board using 1 square inch pad size, 1oz copper
2. Pulse width ≤380us, duty cycle ≤2%

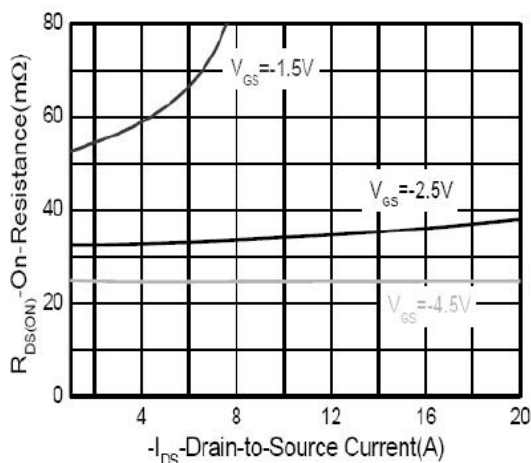
● **Typical Performance Characteristics**($T_a=25^\circ\text{C}$, unless otherwise noted)



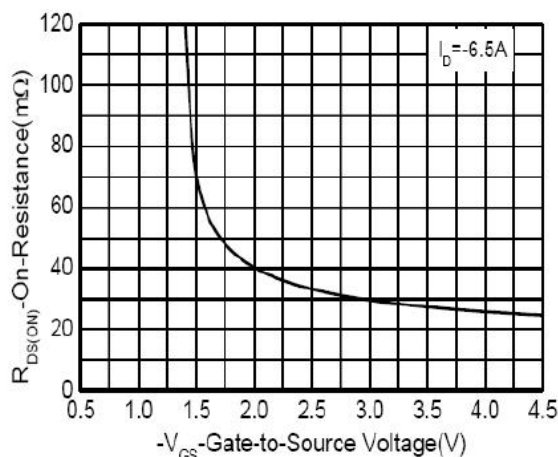
Output characteristics



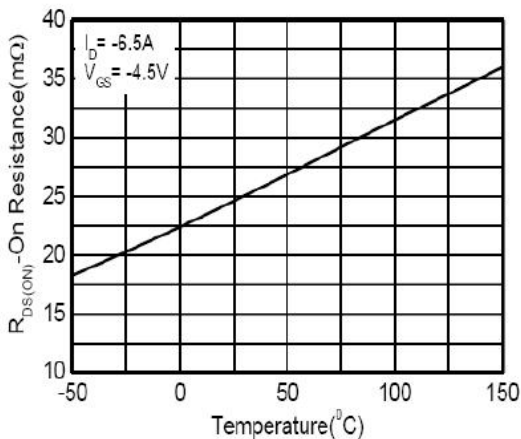
Transfer characteristics



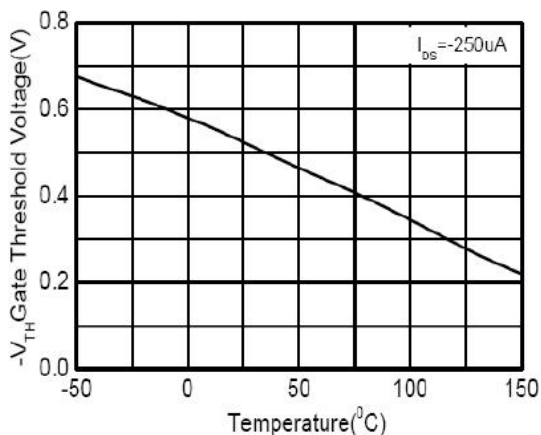
On-Resistance vs. Drain current



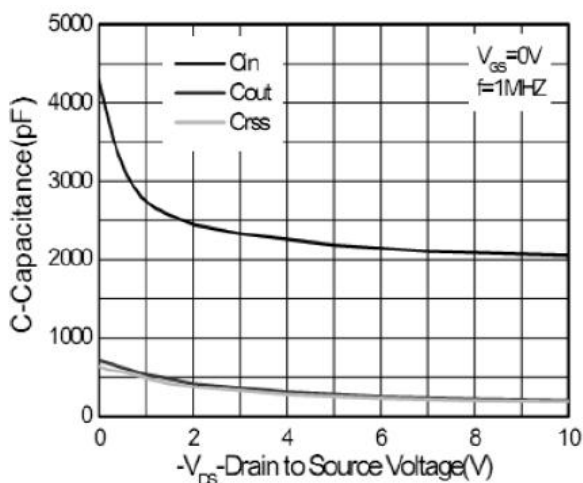
On-Resistance vs. Gate-to-Source voltage



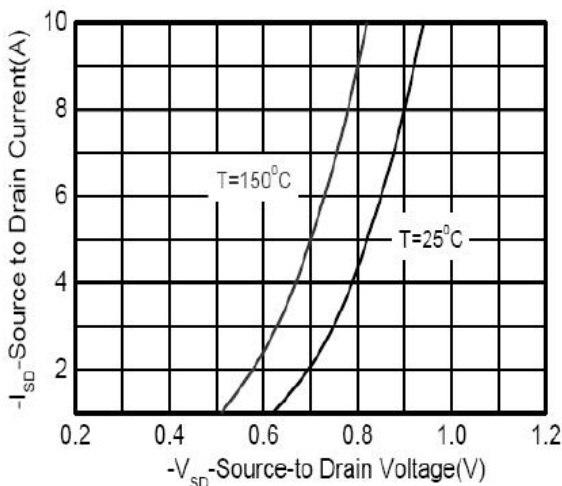
On-Resistance vs. Junction temperature



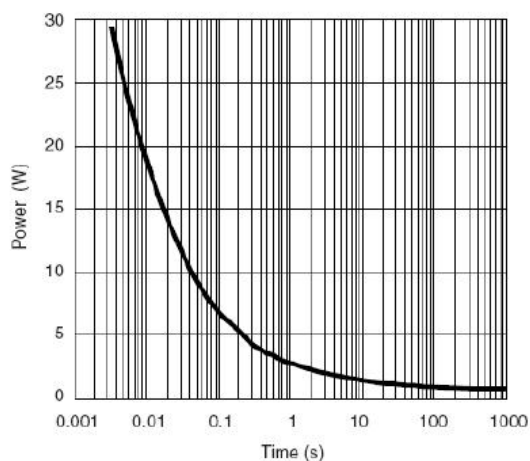
Threshold voltage vs. Temperature



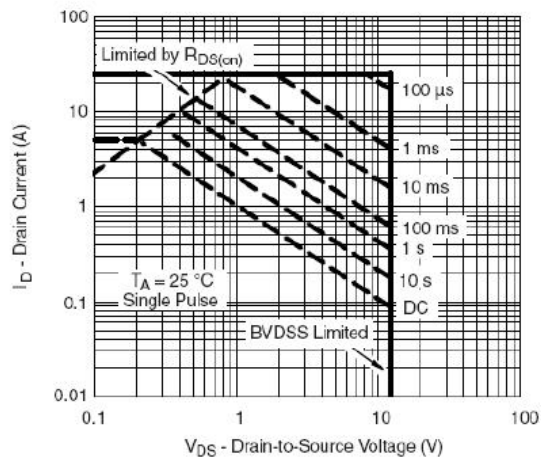
Capacitance



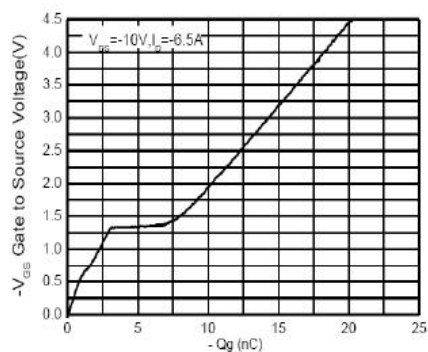
Body diode forward voltage



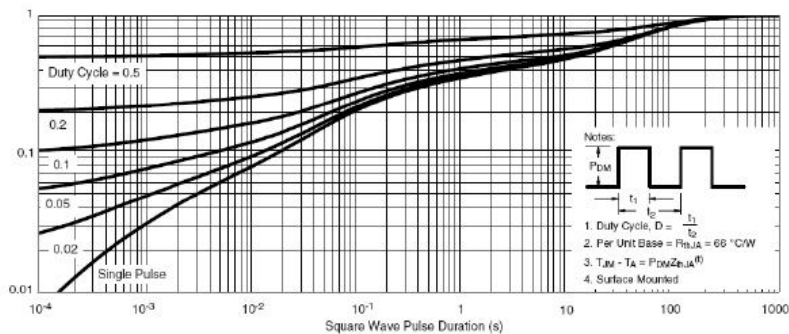
Single pulse power



Safe operating power



Gate Charge Characteristics



Transient thermal response (Junction-to-Ambient)



SSC8029GN2

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