

Dual P-Channel Enhancement Mode MOSFET

Features

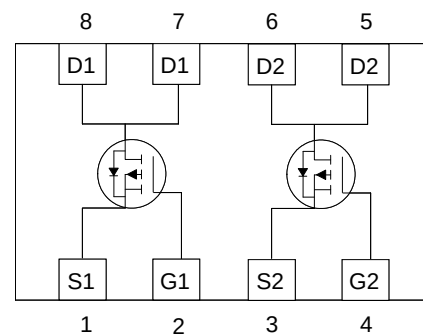
VDS	VGS	RDSon TYP	ID
-20V	±12V	60mR@-4V5	-3.5A
		75mR@-2V5	
		105mR@-1V8	

Applications

- Li Battery Charging;
- High Side DC/DC Converter;
- Load Switch;
- Power Management in Portable, Battery Powered Devices

Pin configuration

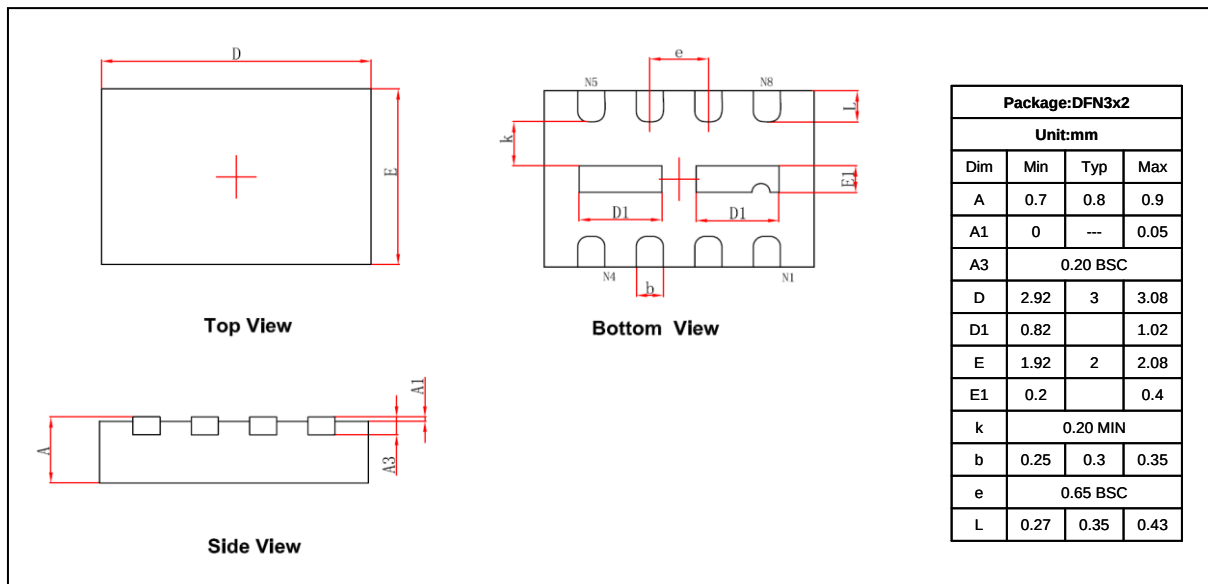
Top View



General Description

SSC8323GN3 combines 2 P-Channel enhancement mode power MOSFETs which are 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.

Package Information





SSC8323GN3

● Absolute Maximum Ratings @ TA = 25°C unless otherwise specified

Parameter		Symbol	Ratings	Unit
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	± 12	
Drain Current ^(Note 1)	Continuous	I_D	-3.5	A
	Pulsed		-25	
Power Dissipation Derating above $T_A = 25^\circ\text{C}$ ^(Note 1)		P_d	1.2	W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inches. The rating is for each chip in the package.

● Electrical Characteristics @ TA = 25°C unless otherwise specified

Parameter ^(Note 2)	Symbol	Test Conditions	Min	Typ	Max	Unit
P-channel MOSFET						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	20	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -20V, V_{GS} = 0V$	--	--	1	μA
Gate-Body Leakage	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$	--	--	± 100	nA
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.50	-0.70	-1.20	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$I_D = -2.8A, V_{GS} = -4.5V$	--	60	95	mR
		$I_D = -2.3A, V_{GS} = -2.5V$	--	75	130	
		$I_D = -0.5A, V_{GS} = -1.8V$	--	105	180	
Diode Forward Voltage	V_{SD}	$V_{GS} = 0V, I_S = -0.9A$	--	-0.71	1.2	V
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -6V, R_L = 6R, I_D = -1A,$ $V_{GEN} = -4.5V, R_G = 6R$	--	20	--	ns
Turn-On Rise Time	t_r		--	18	--	
Turn-Off Delay Time	$t_{d(off)}$		--	300	--	
Turn-Off Fall Time	t_f		--	120	--	
Input Capacitance	C_{ISS}	$V_{DS} = -6V, V_{GS} = 0V,$ $f = 1.0\text{ MHz}$	--	450	--	pF
Output Capacitance	C_{OSS}		--	180	--	
Reverse Transfer Capacitance	C_{RSS}		--	90	--	

Note 2. Short duration test pulse used to minimize self-heating effect.

● P-channel MOSFET Typical Performance Characteristics

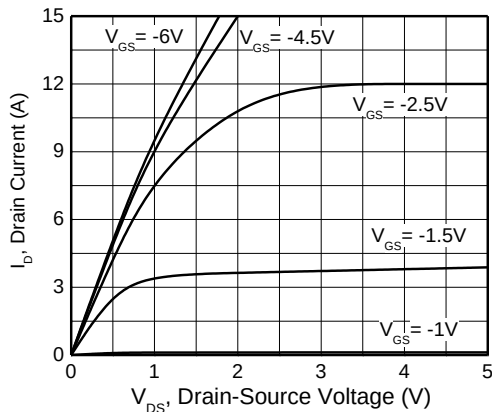


Figure 1. Output Characteristics

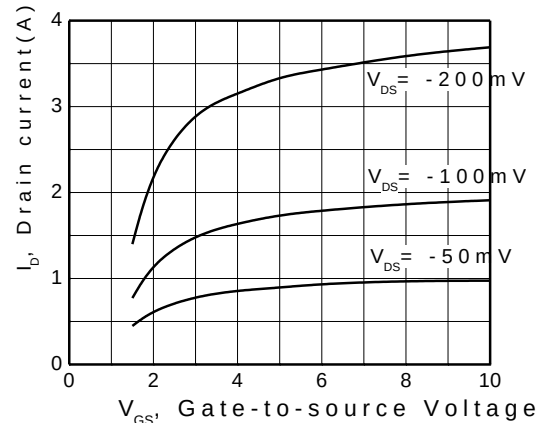


Figure 2. Transfer Characteristics

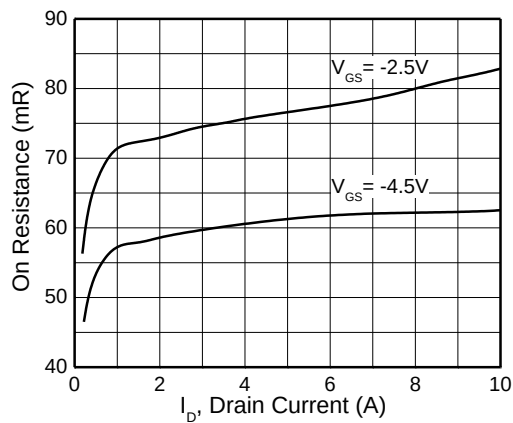


Figure 3. On Resistance VS I_D

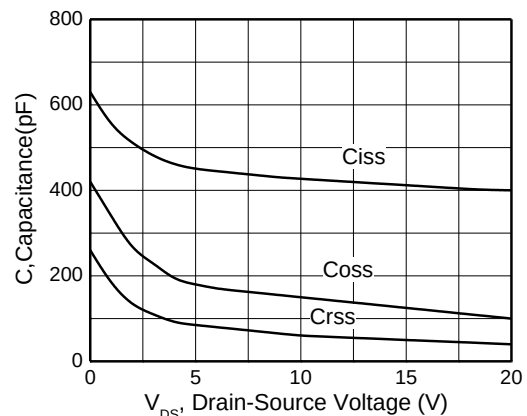


Figure 4. Capacitance

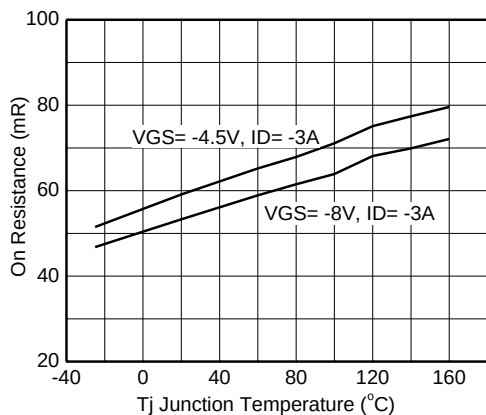


Figure 5. On resistance VS Temperature

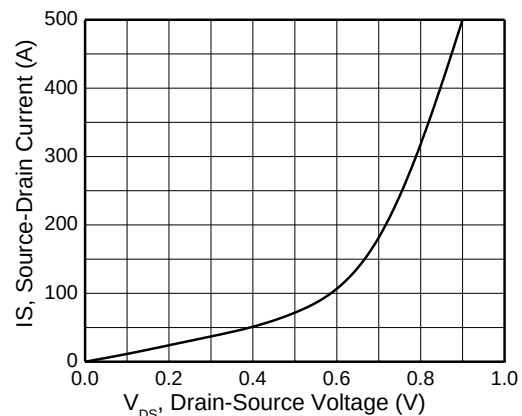
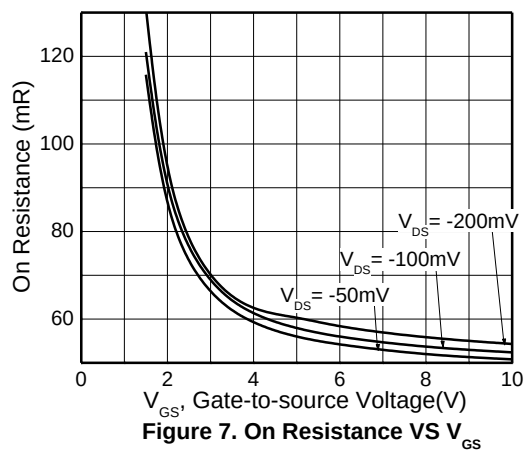
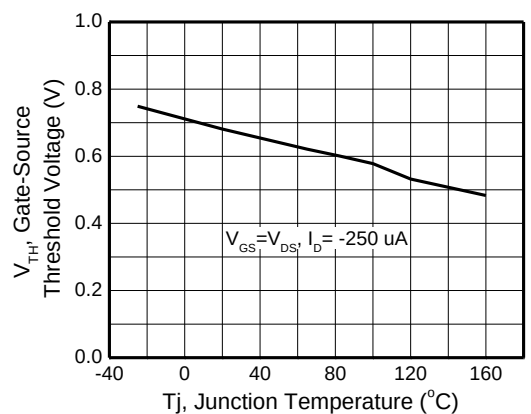


Figure 6. Body Diode Forward Characteristics





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