

N-Channel Enhancement Mode MOSFET

● Features

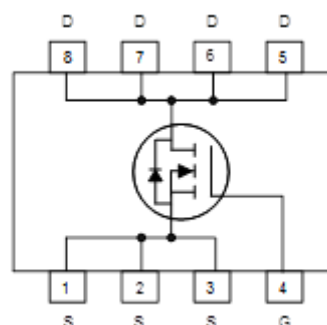
VDS	VGS	RDSon TYP	ID
30V	±20V	8.5mR@10V	12A
		10.5mR@4V5	

● Applications

- Load Switch
- PC/NB
- DCDC conversion

● Pin configuration

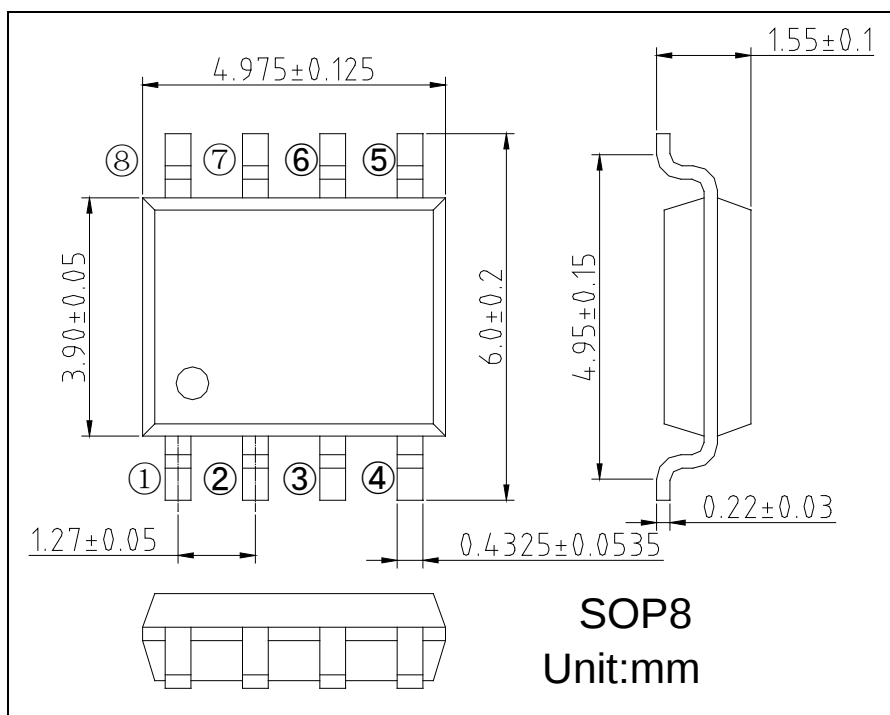
Top View



● General Description

This device uses advanced trench technology to provide excellent RDS(ON) and low gate charge. This device is suitable for use as a load switch or in PWM applications.

● Package Information





SSC8030GS1

● Absolute Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	N-channel	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current (Note 1)	I_D	12	A
Pulsed Drain Current (Note 2)	I_{DM}	50	A
Total Power Dissipation (Note 1)	P_D	2	W
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

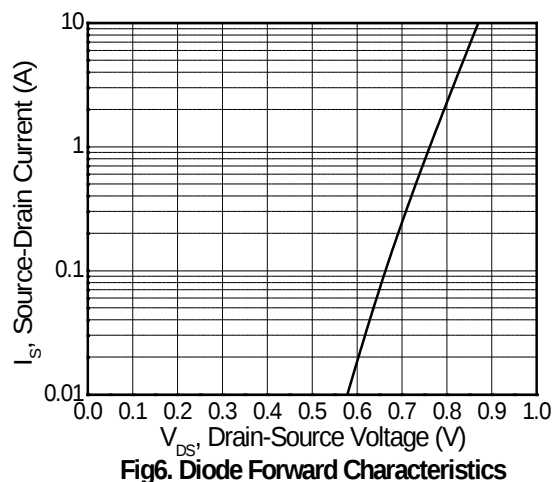
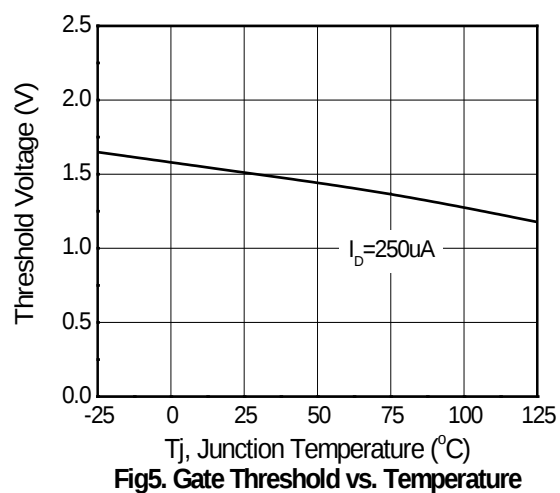
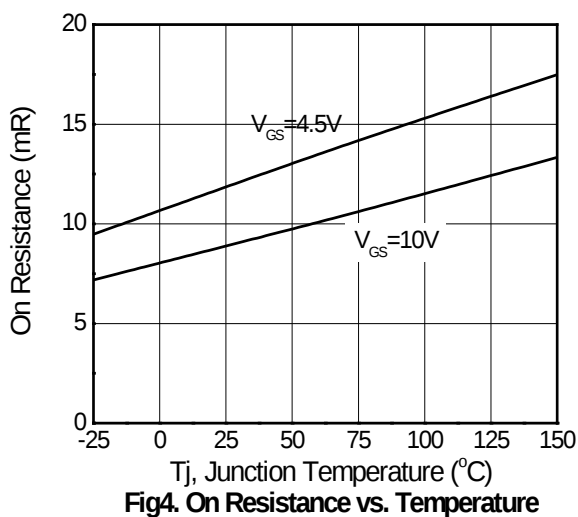
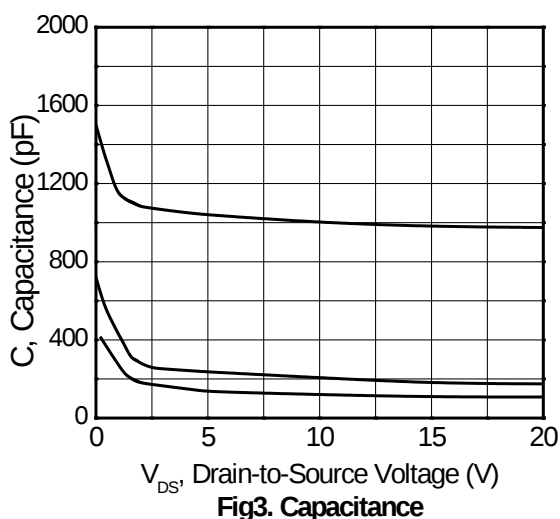
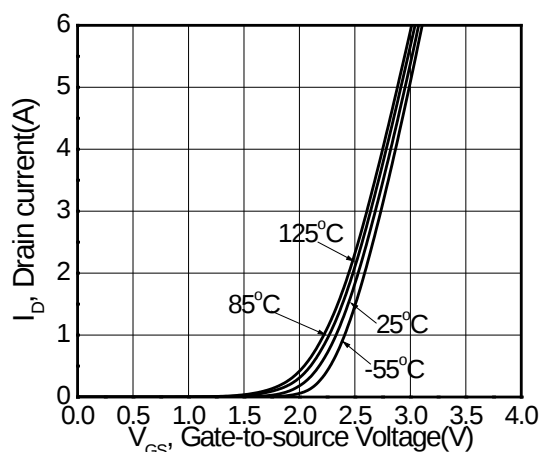
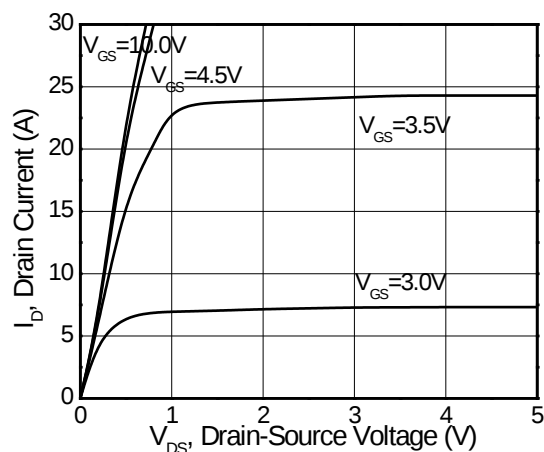
● Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 250\text{ }\mu\text{A}$	30	--	--	V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\text{ }\mu\text{A}$	1	--	3	V
Gate-Body Leakage Current	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$	--	--	± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 24\text{ V}, V_{GS} = 0\text{ V}$	--	--	1	μA
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 15\text{ A}$	--	8.5	10.5	mR
		$V_{GS} = 4.5\text{ V}, I_D = 12\text{ A}$	--	10.5	15	
Forward Transconductance	G_{FS}	$V_{DS} = 15\text{ V}, I_D = 12\text{ A}$	8	16	--	S
Diode Forward Voltage	V_{SD}	$V_{GS} = 0\text{ V}, I_S = 1\text{ A}$	--	0.8	1.5	V
Input Capacitance	C_{ISS}	$V_{DS} = 15\text{ V}, V_{GS} = 0\text{ V},$ $f = 1.0\text{ MHz}$	--	1200	--	pF
Output Capacitance	C_{OSS}		--	200	--	
Reverse Transfer Capacitance	C_{RSS}		--	105	--	
Turn-On Delay Time	$T_{D(ON)}$	$V_{DS} = 15\text{ V}, R_L = 2.3\text{ }\Omega,$	--	--	18	ns
Turn-Off Delay Time	$T_{D(OFF)}$	$V_{GS} = 10\text{ V}, R_{GEN} = 3\text{ }\Omega$	--	--	70	

Note :

1. DUT is mounted on a 1in² FR-4 board with 2oz. Copper in a still air environment at 25°C , the current rating is based on the DC (<10s) test conditions.
2. Repetitive rating, pulse width limited by junction temperature.

3. Typical Performance Characteristics





SSC8030GS1

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