



SSC8062GS1

N-Channel Enhancement Mode Power MOSFET

- **Features**

VDS	VGS	RDSon TYP	ID
60V	±20V	30mR@10V	6A
		35mR@4V5	

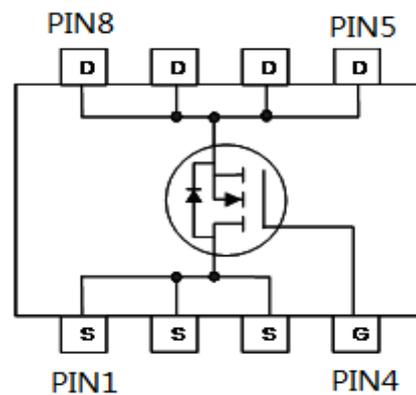
- **Applications**

- Load Switching;
- PWM application

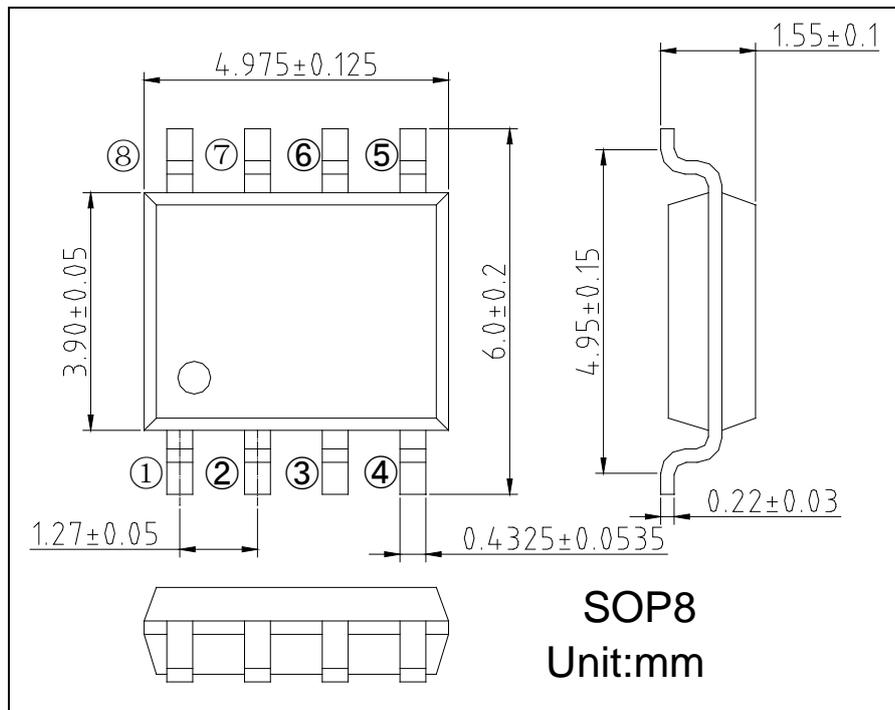
- **General Description**

SSC8062GS1 uses advanced trench technology to provide excellent $R_{DS(ON)}$. It is particularly suitable for DCDC conversion and motor driver.

- **Pin configuration**



- **Package Information**





SSC8062GS1

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

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	Continuous	I_D	6
	Pulse	I_{DM}	45
Total Power Dissipation ^(note1)	P_D	2	W
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note1: Surface Mounted on 1in pad area.

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

Parameter ^(note2)	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 250\mu\text{A}$	60	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 60\text{ V}, V_{GS} = 0\text{ V}$	--	--	1	μA
Gate-Body Leakage	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$	--	--	± 100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	1	1.4	3	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 5.5\text{ A}$	--	30	41	mR
		$V_{GS} = 4.5\text{ V}, I_D = 4.5\text{ A}$	--	35	52	
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{ISS}	$V_{DS} = 10\text{ V}, V_{GS} = 0\text{ V},$ $F = 1\text{ MHz}$	--	1180	--	pF
Output Capacitance	C_{OSS}		--	170	--	
Reverse Transfer Capacitance	C_{RSS}		--	100	--	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	$T_{D(ON)}$	$V_{GS}=10\text{V}, V_{DS}=30\text{V},$ $R_L=5.4\text{R},$ $R_{GEN}=3\text{R}, I_D=5.5\text{A}$	--	--	25	nS
Turn-On Rise Time	T_R		--	--	70	
Turn-Off Delay Time	$T_{D(OFF)}$		--	--	300	
Turn-Off Fall Time	T_F		--	--	150	
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Diode Forward Voltage	V_{SD}	$V_{GS} = 0\text{ V}, I_S = 2\text{ A}$	0.5	0.77	1.0	V

Note2: Short duration test pulse used to minimize self-heating effect.

Typical Performance Characteristics

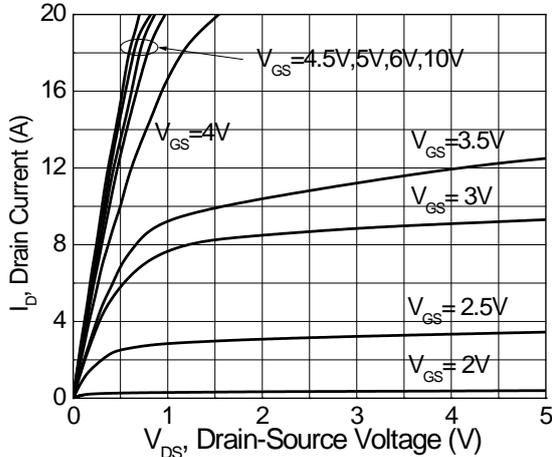


Figure 1. Output Characteristics

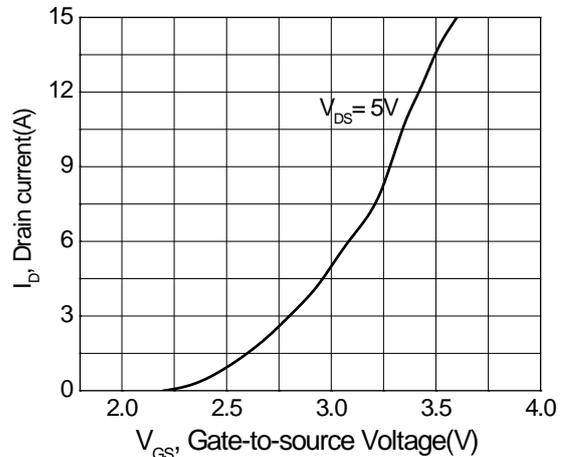


Figure 2. Transfer Characteristics

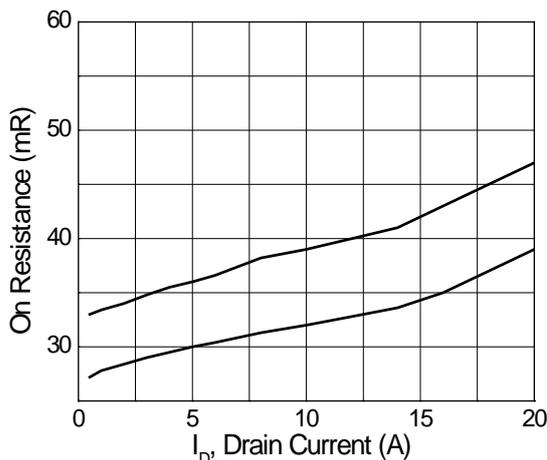


Figure 3. On Resistance

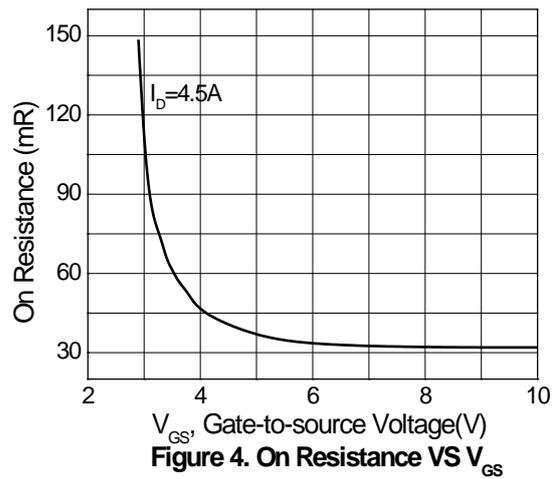


Figure 4. On Resistance VS V_{GS}

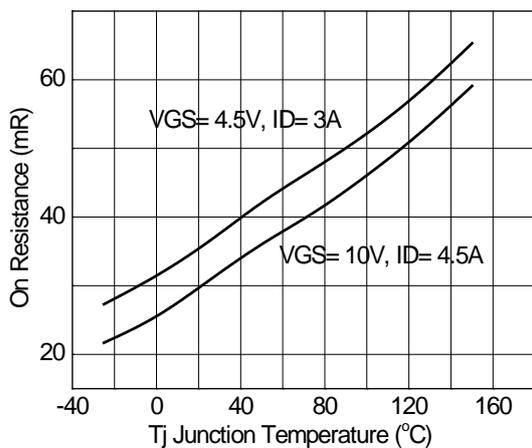


Figure 5. On resistance vs. Temperature

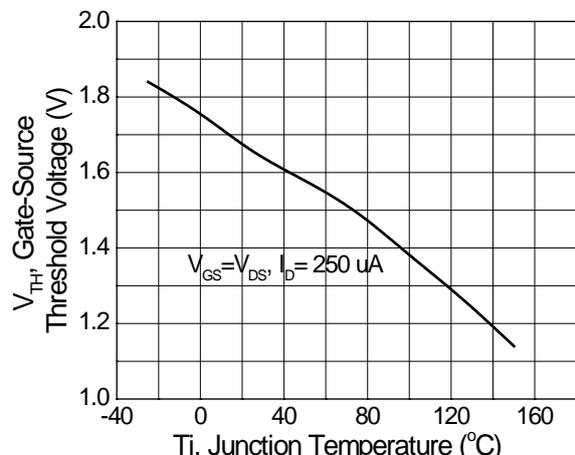


Figure 6. Gate Threshold Vs. Temperature

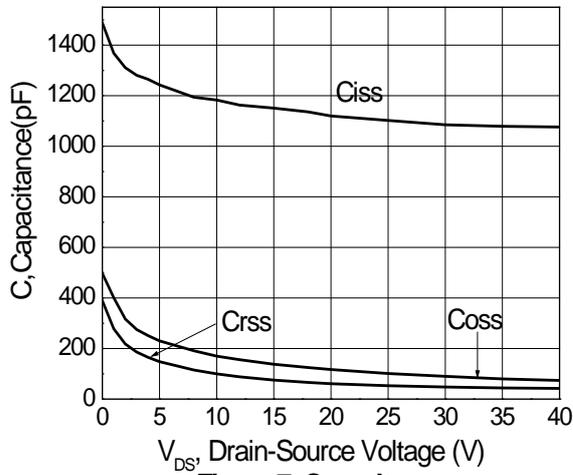


Figure 7. Capacitance

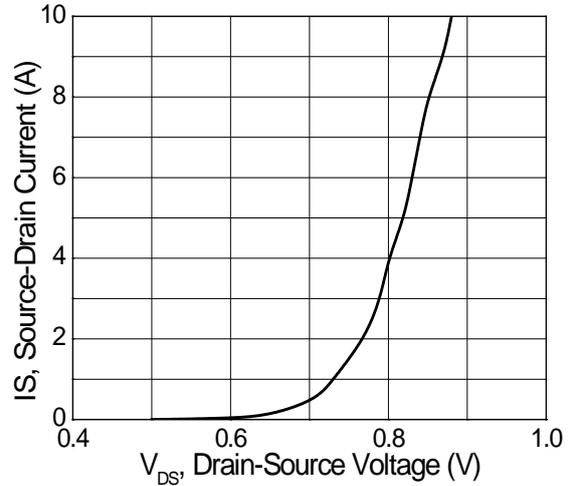


Figure 8. Body Diode Forward Characteristics



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