SSC8362GS1

Dual N-Channel Enhancement Mode MOSFET

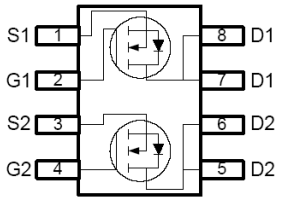
- **Features**

VDS	VGS	RDSon TYP	ID
60V	±20V	30mR@10V	6.5A
		35mR@4V5	

- **Applications**
  - Inverter;

- **Pin configuration**

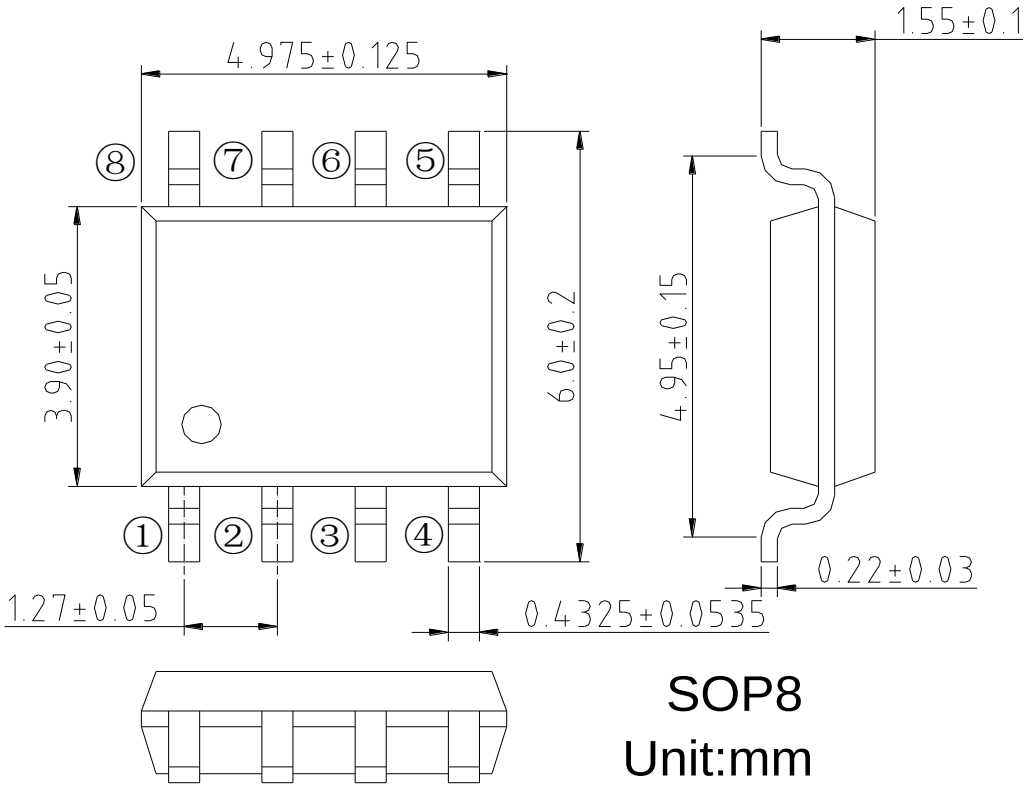
Top View



- **General Description**

This N-Channel enhancement mode power FETs are produced with high cell density, DMOS trench technology, which is especially used to minimize on-state resistance. This device is suitable for use as a load switch，power management in PWM controlled DC/DC Converter and push-pull DC/AC Inverter Systems.

- **Package Information**



SOP8
Unit:mm

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

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	±20	V
Drain Current - Continuous	I_D	6.5	A
Total Power Dissipation (note1,2)	P_D	1.5	W
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	°C

Note:

1. Surface Mounted on 1in pad area, t ≤10sec.
2. Rating for a single chip.

- **Electrical Characteristics** @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 250 uA	60	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 60 V, V_{GS} = 0 V	--	--	1	uA
Gate–Body Leakage	I_{GSS}	V_{GS} = ± 20 V, V_{DS} = 0 V	--	--	±100	nA
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS} = V_{GS}, I_D = 250 uA	1	1.4	3	V
Static Drain–Source On–Resistance	$R_{DS(ON)}$	V_{GS} = 10 V, I_D = 6.5 A	--	30	41	mR
		V_{GS} = 4.5 V, I_D = 4.5 A	--	35	52	
Input Capacitance	C_{ISS}	V_{DS} = 10 V, V_{GS} = 0 V, F = 1MHz	--	1180	--	pF
Output Capacitance	C_{OSS}		--	170	--	
Reverse Transfer Capacitance	C_{RSS}		--	100	--	
Turn–On Delay Time	$T_{D(ON)}$	V_{GS}=10V, V_{DS}=30V, R_L=5.4R, R_{GEN}=3R, I_D=5.5A	--	--	15	nS
Turn–On Rise Time	T_R		--	--	20	
Turn–Off Delay Tim	$T_{D(OFF)}$		--	--	40	
Turn–Off Fall Time	T_F		--	--	15	
Diode Forward Voltage	V_{SD}	V_{GS} = 0 V, I_S = 2 A	0.5	0.77	1.0	V

Note: 1: The value of $R_{\theta JA}$ is measured with the device mounted on 1in ^{2} FR-4 board with 2oz. Copper, in a still air environment with T_A =25°C. The value in any a given application depends on the user's specific board design. The current rating is based on the DC thermal resistance rating.

2: Repetitive rating, pulse width limited by junction temperature.

- **Typical Performance Characteristics**

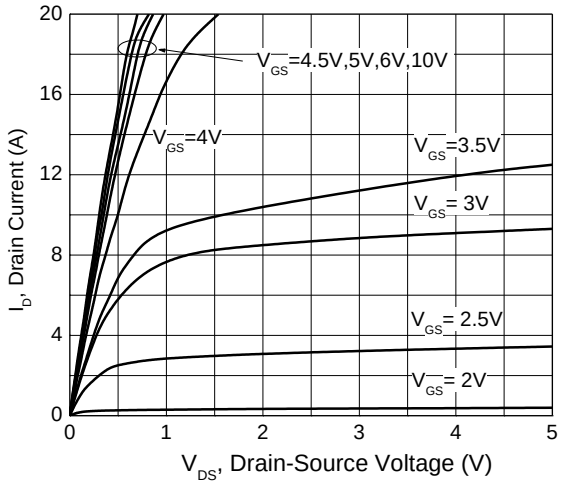


Figure 1. Output Characteristics

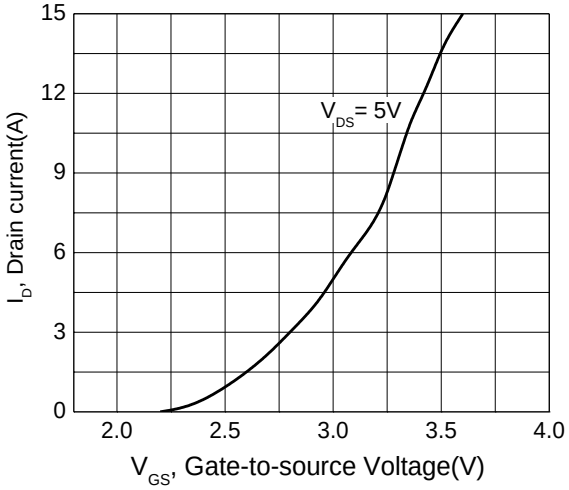


Figure 2. Transfer Characteristics

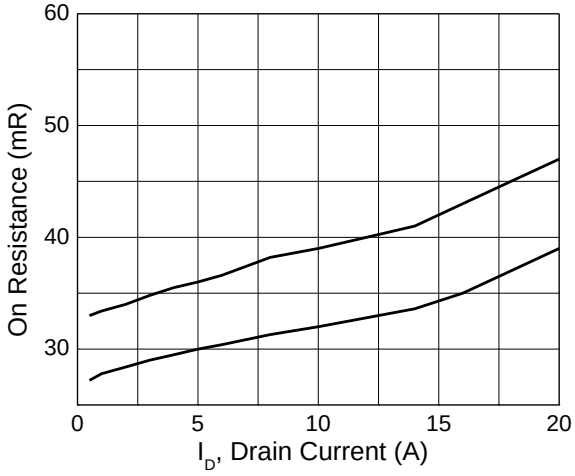


Figure 3. On Resistance vs. Drain Current

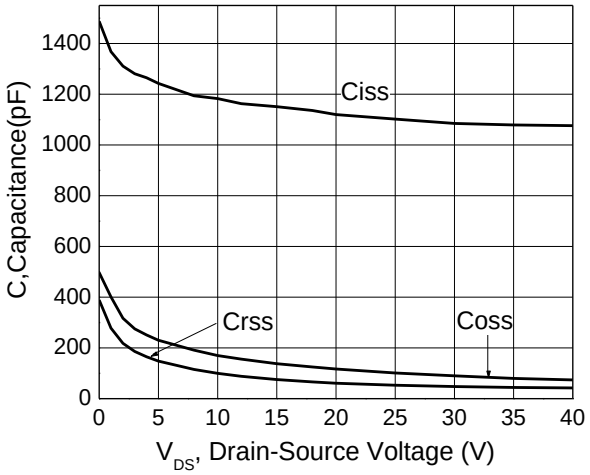


Figure 4. Capacitance

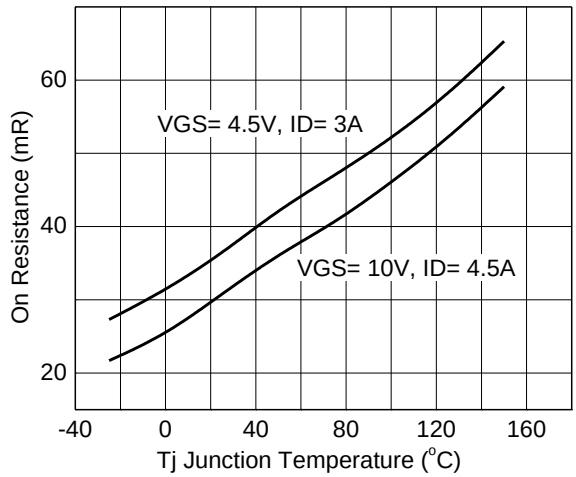


Figure 5 . On resistance vs. Temperature

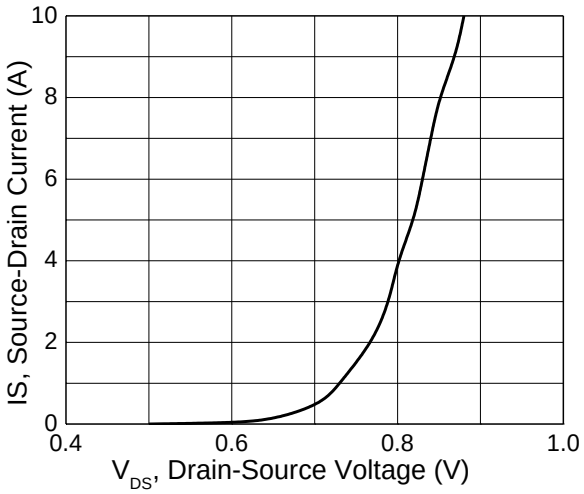


Figure 6. Diode Forward Characteristics

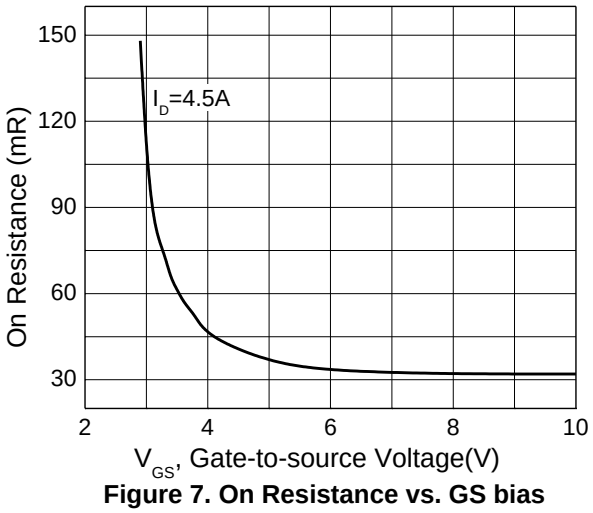


Figure 7. On Resistance vs. GS bias

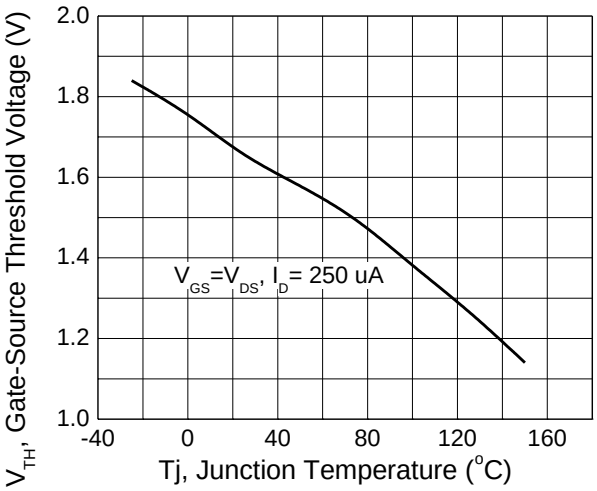


Figure 8. Gate Threshold vs. Temperature

DISCLAIMER

AFSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. AFSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G,. OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.