

Dual N-Channel Enhancement Mode MOSFET

- **Features**

VDS	VGS	RDSon TYP	ID
20V	±12V	20mR@4V5	6A
		22mR@3V8	
		24mR@2V5	

- **General Description**

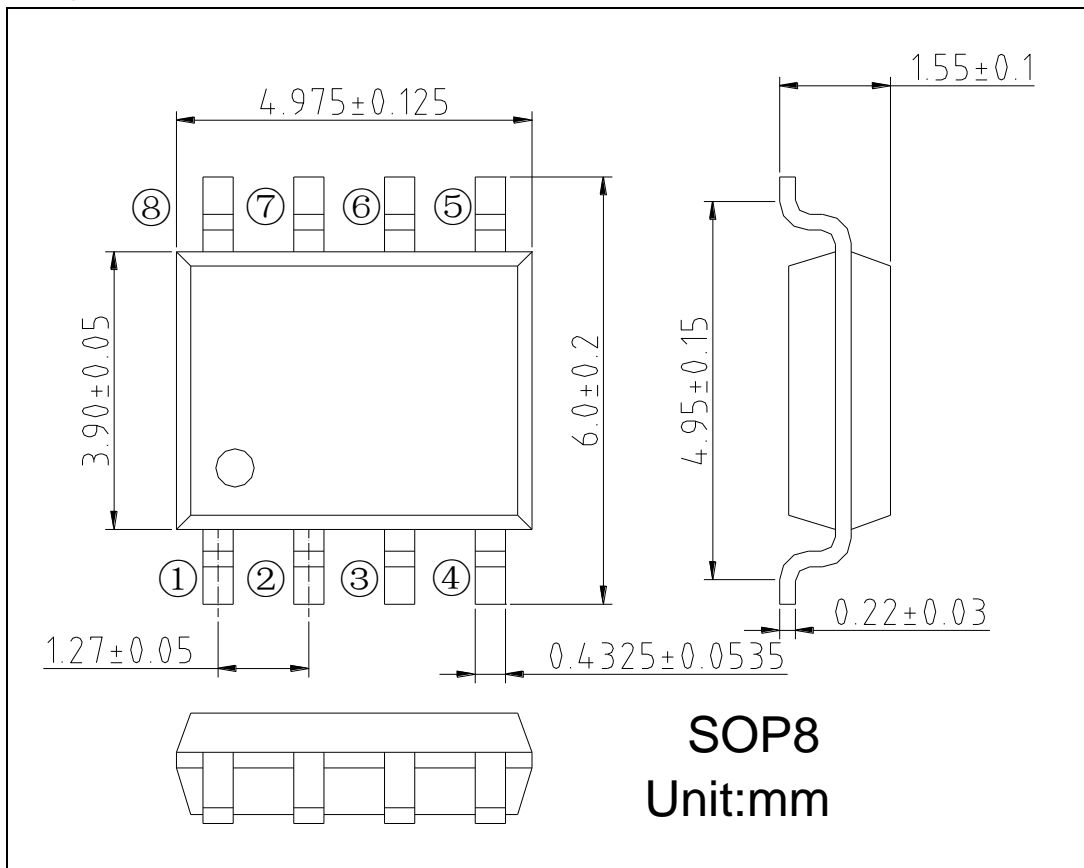
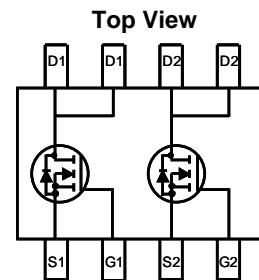
This device combines 2 N-channel enhancement mode MOSFETs, which use advanced trench technology to provide excellent RDS(ON), low gate charge and operation with gate voltages as low as 2.5V. This device is suitable for use as a load switch or in PWM applications.

- **Package Information**

- **Applications**

- Li-ion battery;
- Load switch;
- Battery charger


- **Pin configuration**





SSC8326GS1

- **Order information**

Device	Package	Marking	Shipping
SSC8326GS1	SOP-8		2500/Tape&Reel

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

Parameter	Symbol	Max	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	
Continuous Drain Current ^a $V_{GS}@4.5V$ $T_A = 25^\circ\text{C}$	I_D	6	A
Continuous Drain Current ^a $V_{GS}@4.5V$ $T_A = 70^\circ\text{C}$		5	A
Plused Drain Current ^b	I_{DM}	35	A
Power Dissipation ^a $T_C = 25^\circ\text{C}$	P_D	3.1	W
Power Dissipation ^a $T_C = 70^\circ\text{C}$		2	W
Lead Temperature	T_L	260	$^\circ\text{C}$
Storage and Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

- **Thermal Characteristics**

Parameter	Symbol	Typ	Max	Units	
Maximum Junction-to-Ambient ^{a,c}	$R_{\theta JA}$	$t \leq 10\text{S}$	35	50	$^\circ\text{C/W}$
		Steady-State	69	87	$^\circ\text{C/W}$
	Steady-State	$R_{\theta JC}$	26	35	$^\circ\text{C/W}$



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS (Note 2)						
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
ON CHARACTERISTICS (Note 2)						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.5	0.70	1	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 2A$	--	20	24	mR
		$V_{GS} = 3.8V, I_D = 2A$	--	22	25	
		$V_{GS} = 2.5V, I_D = 2A$	--	24	34	
Forward Transconductance	G_{FS}	$V_{DS} = 10V, I_D = 6A$	--	5	--	S
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{ISS}	$V_{DS} = 10V, V_{GS} = 0V$ $F = 1.0MHz$	--	610	--	pF
Output Capacitance	C_{OSS}		--	335	--	
Reverse Transfer Capacitance	C_{RSS}		--	148	--	
Total Gate Charge	Q_G	$V_{DS} = 10V, I_D = 6A,$ $V_{GS} = 4.5V$	--	11	--	nC
Gate-Source Charge	Q_{GS}		--	3.1	--	
Gate-Drain	Q_{GD}		--	2.6	--	
Diode Forward Voltage	V_{SD}	$V_{GS} = 0V, I_S = 1.7A$	--	0.74	1.3	V
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	$T_{D(ON)}$	$V_{DD} = 10V, I_D = 1A,$	--	8	--	ns
Turn-Off Delay Time	$T_{D(OFF)}$	$V_{GEN} = 4.5V, R_G = 6R$	--	35	--	

Notes :

a: mounted on 1in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^\circ\text{C}$.

b: Pulse Test: Pulse Width $< 300\mu s$, Duty Cycle $< 2\%$

c: mounted on FR-4 minimum pad board, in a still air environment with $T_A = 25^\circ\text{C}$.

● **Typical Performance Characteristics**

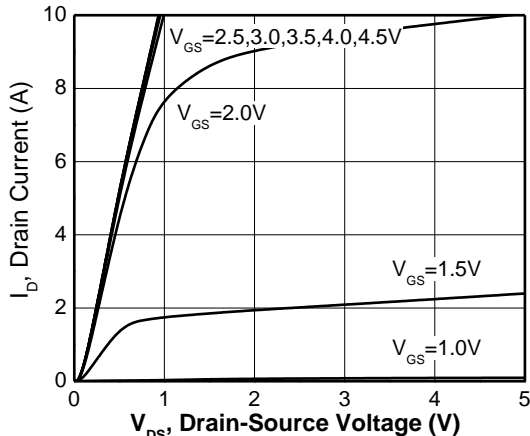


Figure 1. Output Characteristics

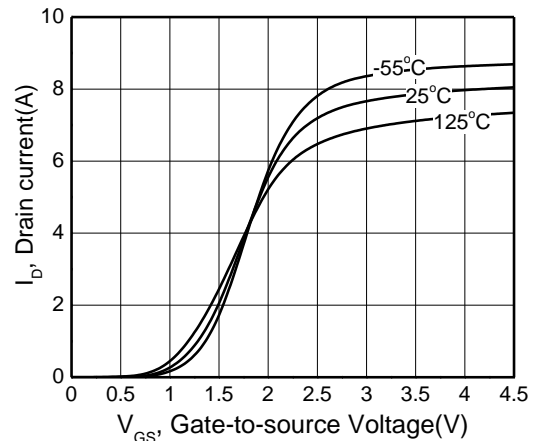


Figure 2. Transfer Characteristics

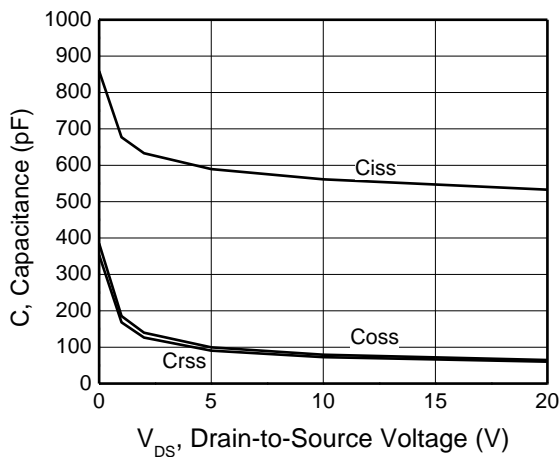


Figure 3. Capacitance

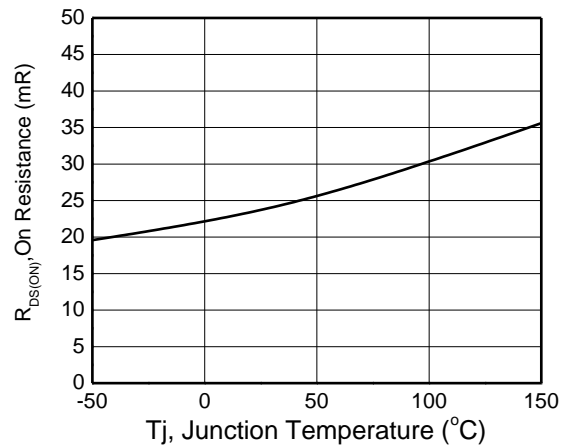


Figure 4. On Resistance Vs. Temperature

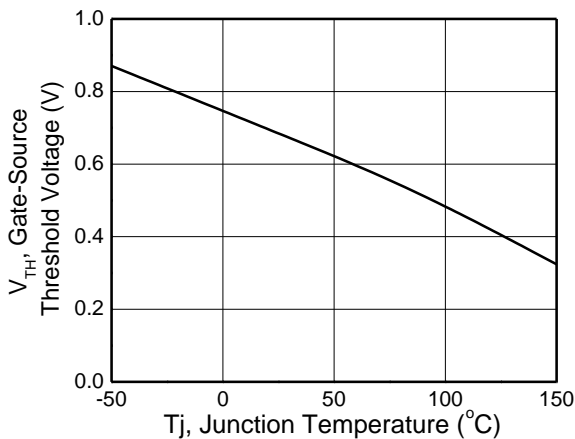


Figure 5. Gate Threshold Vs. Temperature

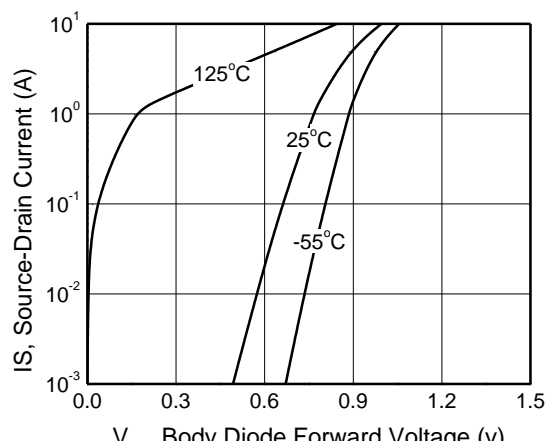


Figure 6. Body Diode Forward Voltage Vs. Source Current



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