



SSC8326GS1

Dual N-Channel Enhancement Mode MOSFET

➤ Features

VDS	VGS	RDS(on) Typ.	ID
20V	±12V	20mR@4V5	6A
		24mR@2V5	

➤ Description

This device is produced with high cell density, DMOS trench technology, which is especially used to minimize on-state resistance. This device is particularly suited for low voltage power management requiring a wide range of given voltage ratings(4.5V~25V) such as load switch and battery protection.

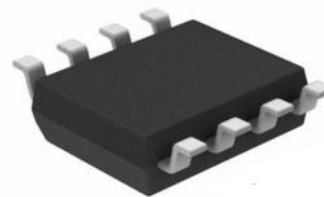
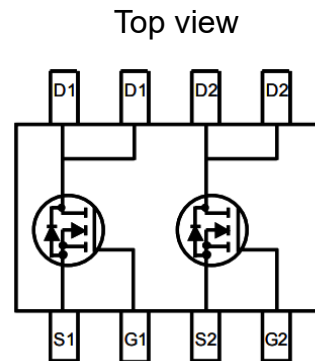
➤ Applications

- Li Battery
- Battery charge
- Load Switch

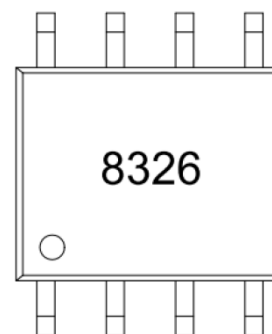
➤ Ordering Information

Device	Package	Shipping
SSC8326GS1	SOP-8	2500/Reel

➤ Pin configuration



Bottom View



Marking



➤ **Absolute Maximum Ratings**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	20	V
V_{GSS}	Gate-to-Source Voltage	± 12	V
I_D	Continuous Drain Current ^a	6	A
I_{DM}	Pulsed Drain Current ^b	24	A
P_D	Power Dissipation ^c	3.1	W
P_{DSM}	Power Dissipation ^a	1.1	W
T_J	Operation junction temperature	-55 to 150	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55 to 150	$^{\circ}\text{C}$

➤ **Thermal Resistance Ratings**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Typical	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance ^a		120	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		45	

Note:

- The value of $R_{\theta JA}$ is measured with the device mounted on 1 in² FR-4 board with 2oz.copper,in a still air environment with $T_A=25^{\circ}\text{C}$.The value in any given application depends on the user is specific board design. The current rating is based on the $t \leq 10\text{s}$ thermal resistance rating.
- Repetitive rating, pulse width limited by junction temperature.
- The power dissipation P_D is based on $T_J(\text{MAX})=150^{\circ}\text{C}$, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.

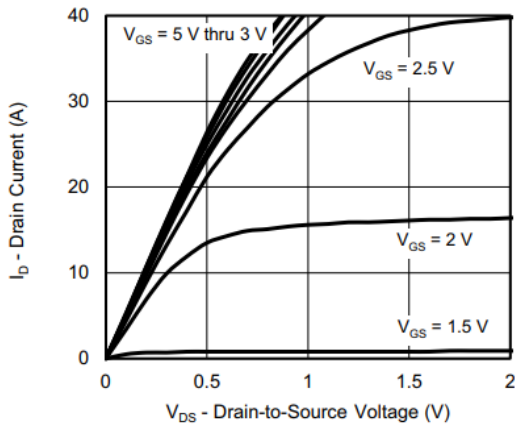


➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

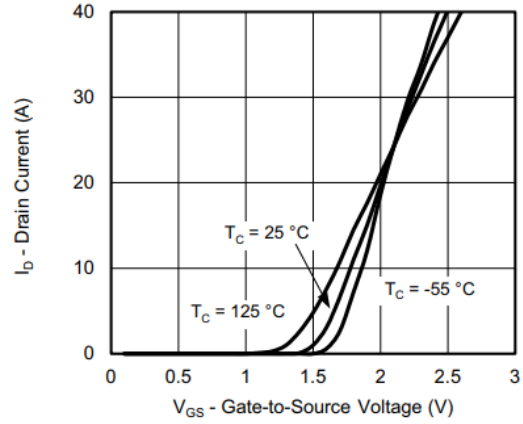
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	20			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	0.5	0.7	1	V
$R_{DS(on)}$	Drain-Source On- Resistance	$V_{GS}=4.5V, I_D=2A$		20	24	mR
		$V_{GS}=2.5V, I_D=2A$		24	34	
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=20V, V_{GS}=0V$			1	μA
I_{GSS}	Gate-Source leak current	$V_{GS}=\pm 12V, V_{DS}=0V$			± 100	nA
V_{SD}	Forward Voltage	$V_{GS}=0V, I_S=1.7A$		0.7	1.3	V
G_{FS}	Transconductance	$V_{DS}=10V, I_D=4A$		10		S
C_{iss}	Input Capacitance	$V_{DS}=10V, V_{GS}=0V,$ $f=1MHz$		610		pF
C_{oss}	Output Capacitance			335		
C_{rss}	Reverse Transfer Capacitance			148		
$T_{D(ON)}$	Turn-on delay time	$V_{GS}=4.5V,$ $V_{DS}=10V, R_G=6R, I_D=1A$		8		ns
T_r	Rise time			7		
$T_{D(OFF)}$	Turn-off delay time			35		
T_f	Fall time			10		
Q_g	Total Gate charge	$V_{GS}=4.5V, V_{DS}=15V,$ $I_D=3A$		10.5		nC
Q_{gs}	Gate to Source charge			1.9		
Q_{gd}	Gate to Drain charge			1.8		



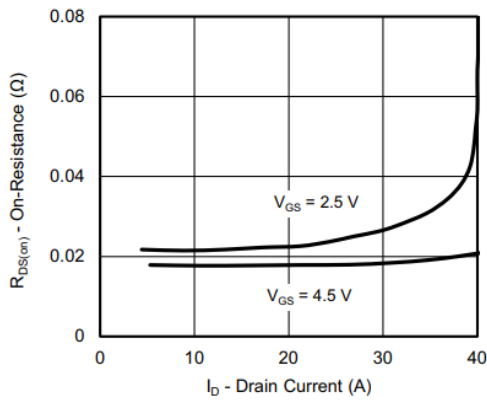
➤ **Typical Characteristics** ($T_A=25^\circ\text{C}$ unless otherwise noted)



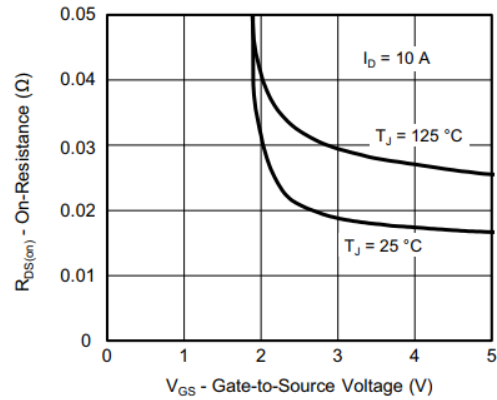
Output Characteristics



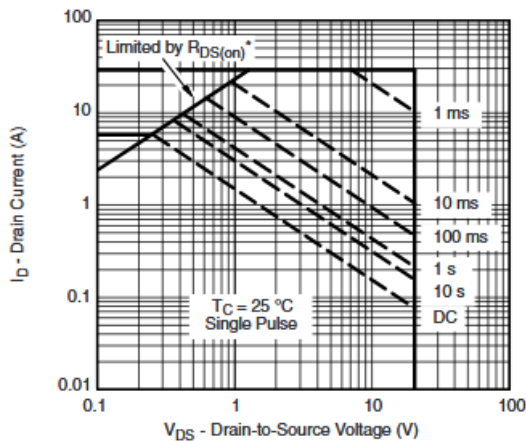
Transfer Characteristics



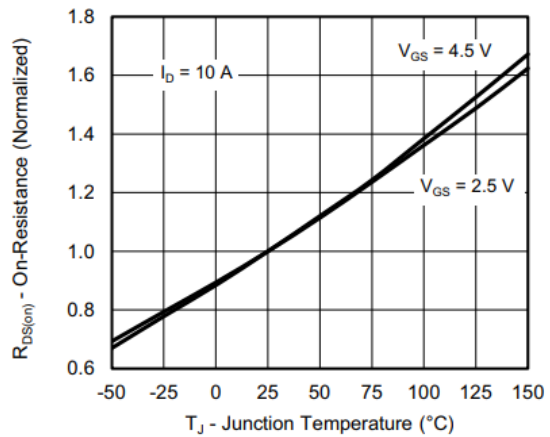
On-Resistance vs. Drain Current and Gate Voltage



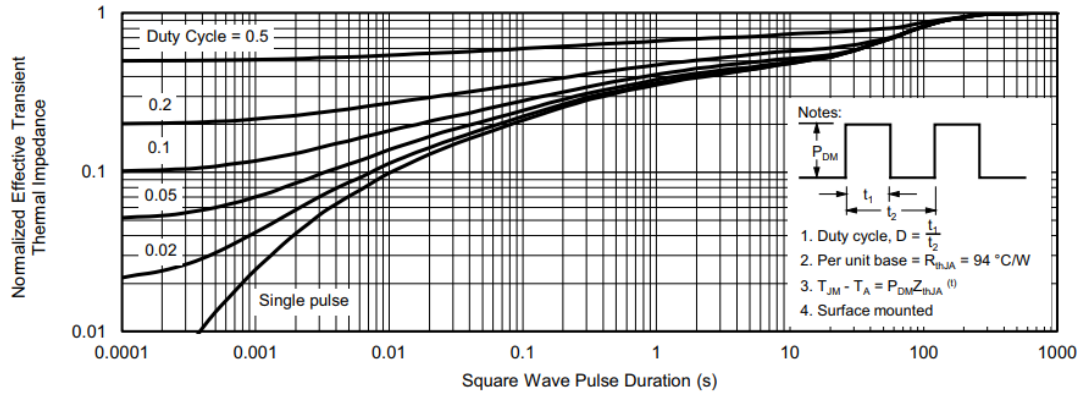
On-Resistance vs. Gate-to-Source Voltage



Safe Operating Area, Junction-to-Case



On-Resistance vs. Junction Temperature



Normalized Thermal Transient Impedance, Junction-to-Ambient

