SSC8L410GT8

N-Channel Enhanced MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
40V	±20V	4.3mR@10V	95A
		7mR@4.5V	

➢ Description

This device is N-Channel enhancement MOSFET. Uses advanced trench technology and design to provide excellent RDSON with low gate charge. This device is suitable for use in DC-DC conversion, power switch and charging circuit.

100%UIS+DVDS+Rg Test.

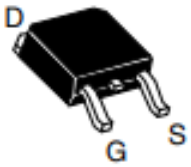
➢ Applications

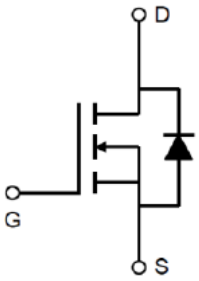
- DC/DC converters
- Power supplies
- Motor Drive Control
- Synchronous rectification

➢ Ordering Information

Device	Package	Shipping
SSC8L410GT8	TO-252	2500/Reel

➢ Pin configuration





Marking

（XX:Product Year/YY: Product Week）

➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

Symbol	Parameter		Ratings	Unit
V_{DSS}	Drain-to-Source Voltage		40	V
V_{GSS}	Gate-to-Source Voltage		±20	V
I_D	Continuous Drain Current [d]	T_C=25℃	95	A
		T_C=100℃	55	
I_{DSM}	Continuous Drain Current [a]	T_A=25℃	23.5	A
		T_A=70℃	17.9	
I_{DM}	Pulsed Drain Current [b]		380	A
P_D	Power Dissipation [c]	T_C=25℃	62	W
		T_C=100℃	25	
P_{DSM}	Power Dissipation [a]	T_A=25℃	3.8	W
		T_A=70℃	2.4	
I_{AS}	Avalanche Current [b] L=0.5mH Single Pulse		23	A
E_{AS}	Avalanche Energy [b] L=0.5mH Single Pulse		132	mJ
T_J	Operation junction temperature		-55~150	℃
T_{STG}	Storage temperature range		-55~150	

➢ Thermal Resistance Ratings(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Ratings	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]	33	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance [e]	2	

Note:

a. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in^2 FR-4 board with 2oz.copper, in a still air environment with T_A=25℃.The value in any given application depends on the user is specific board design. The power dissipation is based on the t ≤10s thermal resistance rating.

b. Repetitive rating, pulse width limited by junction temperature.

c. The power dissipation P_D is based on $T_{J(MAX)}$=150°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.

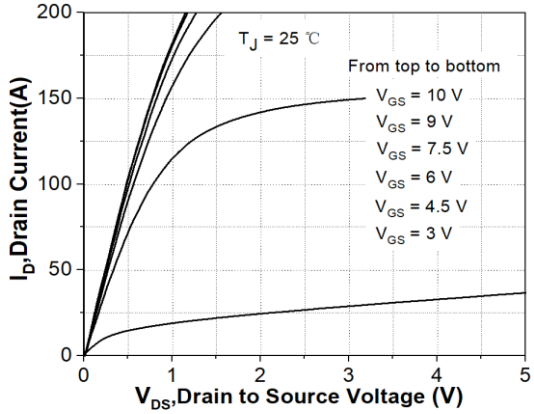
d. The maximum current rating is package limited.

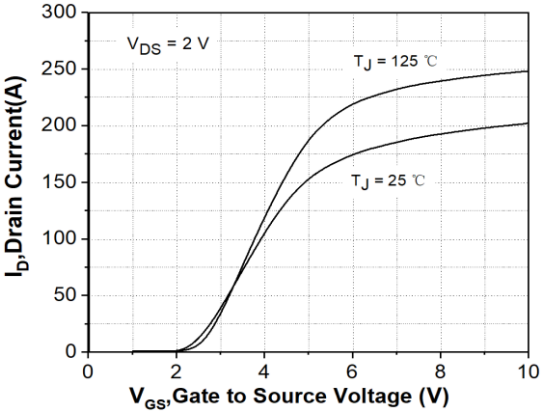
e. The value of Rjc has been determined of the temperature difference between junction and the case surface in contact with water cooled copper heat sink.

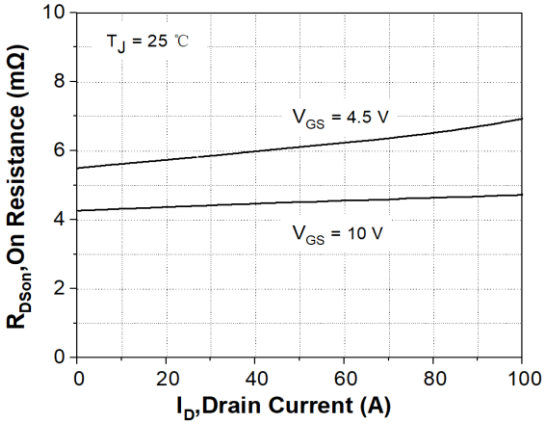
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

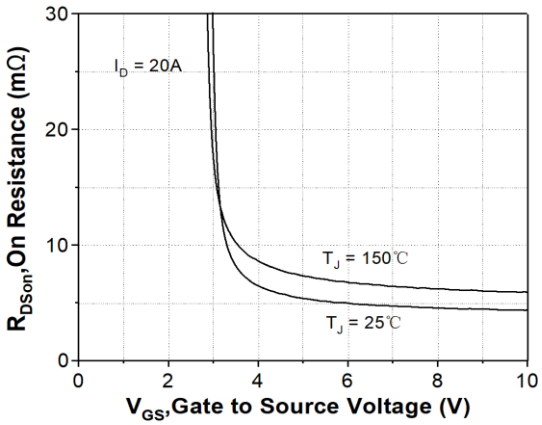
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V ,ID=250uA	40			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS ,ID=250uA	1	1.5	2	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=10V , ID=20A		4.3	5.5	mR
		VGS=4.5V , ID=10A		7	9	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=40V ,VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±20V ,VDS=0V			±200	nA
G_{FS}	Transconductance	VDS=5V ,ID=10A		16		S
V_{SD}	Forward Voltage	VGS=0V , IS=10A		0.8	1.3	V
Rg	Gate Resistance	VGS=0V, f=1MHz		1.6		R
Ciss	Input Capacitance	VDS=20V , VGS=0V, f=1MHz		1500		pF
Coss	Output Capacitance			330		
Crss	Reverse Transfer Capacitance			28		
$T_{D(ON)}$	Turn-on delay time	VGS=10V, RL=1R VDS=20V , RG=3R		5.5		ns
Tr	Rise time			29		
$T_{D(OFF)}$	Turn-off delay time			31		
Tf	Fall time			9		
Q_G	Total Gate Charge	VGS=10V, VDS=20V ID=20A		27		nC
Q_{GS}	Gate Source Charge			4		
Q_{GD}	Gate Drain Charge			7		
Trr	Diode Recovery Time	IF=20A , di/dt=500A/us		14		ns
Qrr	Diode Recovery Charge	IF=20A , di/dt=500A/us		5		nC

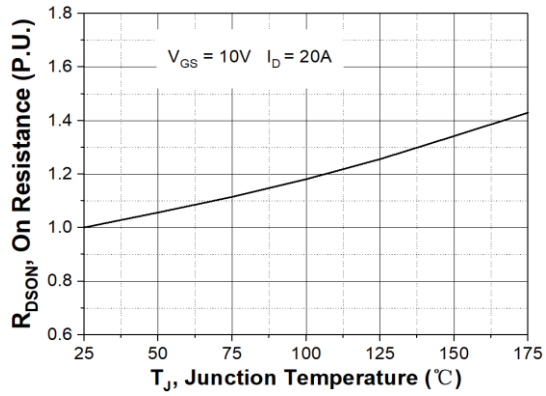
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)

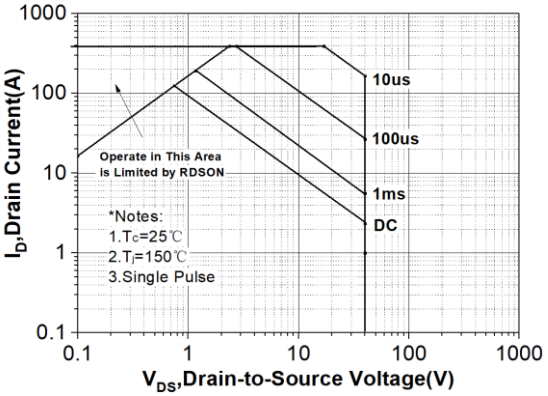


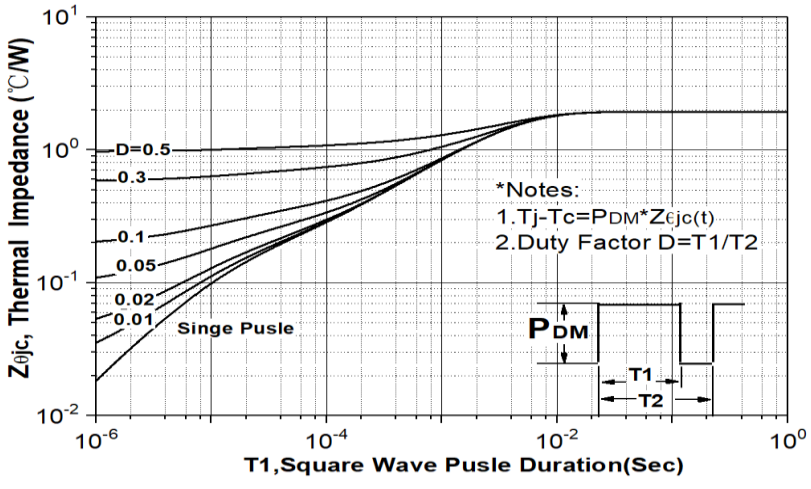




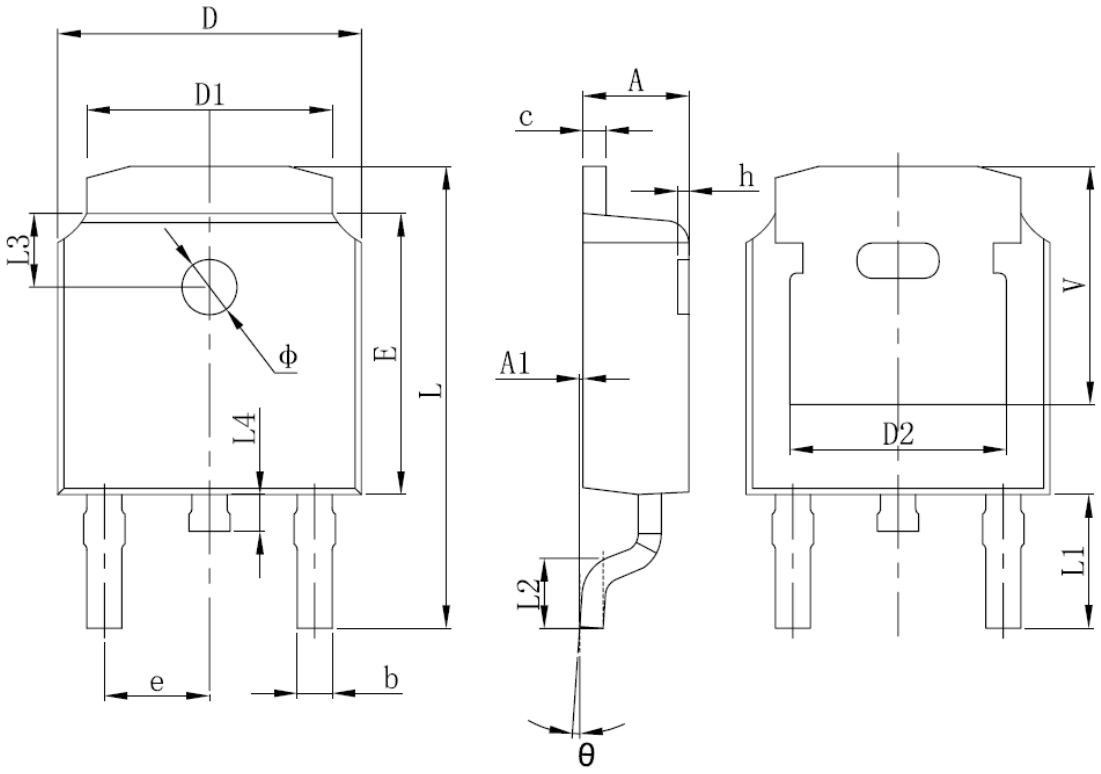








➢ Package Information

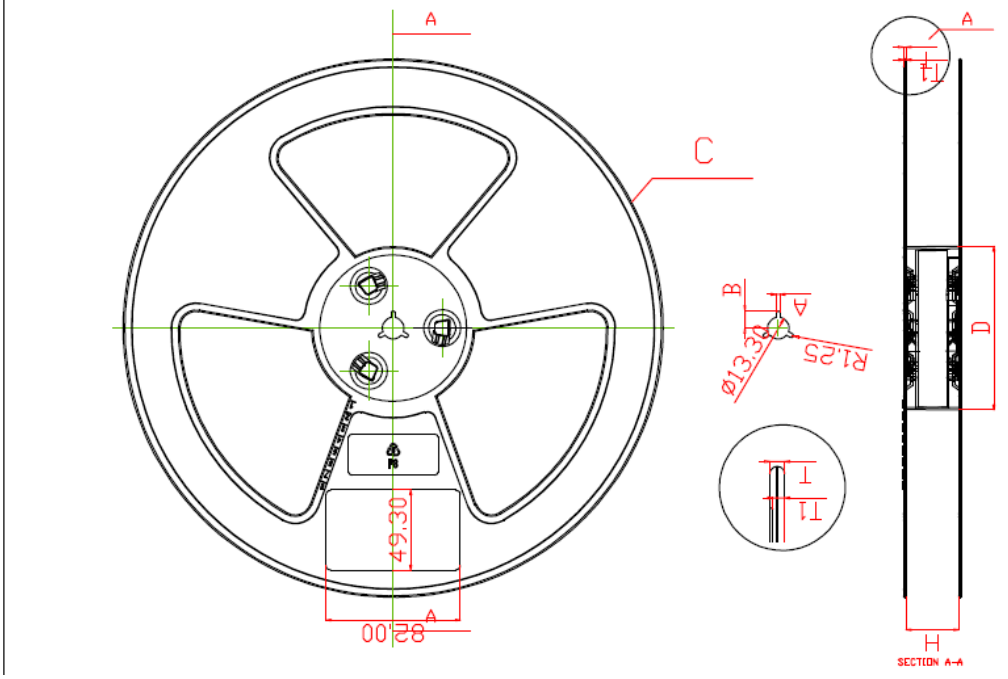


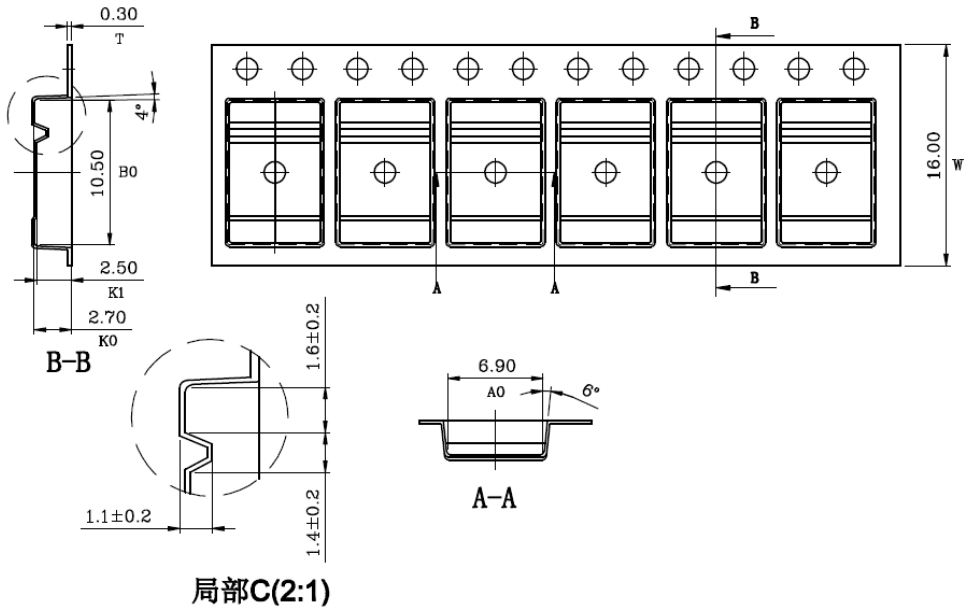
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	

➢ Tape and Reel

材质：PS　　**未标注公差：**± 0.2

H	12	16	24	32
C±0.2	330	330	330	330
T1±0.2	1.45	1.45	1.45	1.45
B±0.2	10.7	10.7	10.7	10.7
A±0.2	2.5	2.5	2.5	2.5
T±0.2	1.85	1.85	1.85	1.85
D±0.2	100	100	100	100





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