SSC8LA4GS6

N-Channel Enhancement Mode MOSFET

➢ Features

V_{DS}	V_{GS}	$R_{DS(ON)}$ Typ.	I_D
100V	±20V	120mΩ@10V	2.5A
		153mΩ@4V5	

➢ Description

This device is N-Channel enhancement MOSFET. Uses SGT 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.

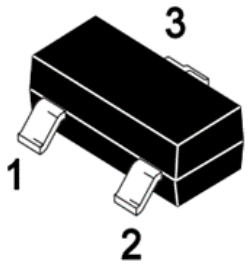
➢ Applications

- Load Switch
- Portable Devices
- DCDC Conversion

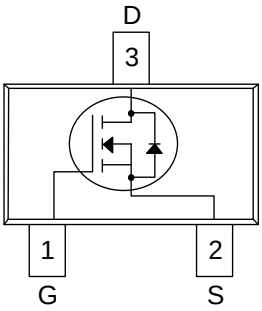
➢ Ordering Information

Device	Package	Shipping
SSC8LA4GS6	SOT-23	3000/Reel

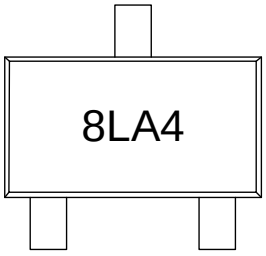
➢ Pin configuration



SOT-23



Pin Configuration (Top View)



Marking

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

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	100	V
V_{GSS}	Gate-to-Source Voltage	±20	V
I_D	Continuous Drain Current [d]	2.5	A
I_{DM}	Pulsed Drain Current [b]	10	A
P_D	Power Dissipation [c]	1.4	W
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	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]	95	℃/W

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.

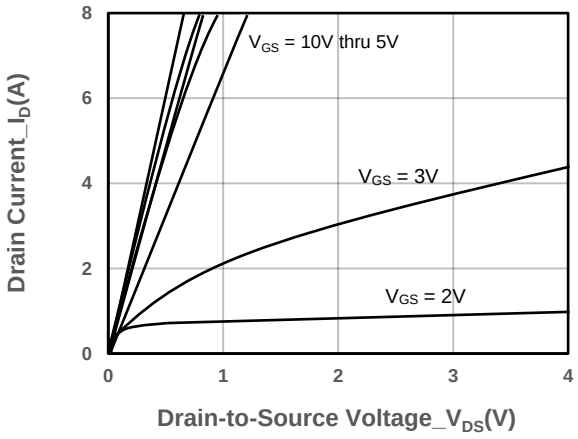
b. Repetitive rating, pulse width limited by junction temperature.

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.

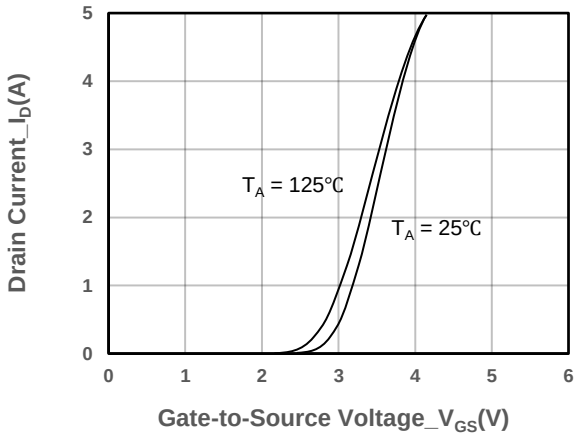
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = 250μA	100			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250uA	1	2	3	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 2A		120	156	mΩ
		V_{GS} = 4.5V, I_D = 1A		153	195	
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 100V, V_{GS} = 0V			1	μA
Gate-Source Leak Current	I_{GSS}	V_{GS} = ±20V, V_{DS} = 0V			±100	nA
Transconductance	G_{FS}	V_{DS} = 5V, I_D = 2A		7		s
Forward Voltage	V_{SD}	V_{GS} = 0V, I_S = 1A		0.74	1.3	V
Gate Resistance	R_G	V_{GS} = 0V, f = 1MHz		9		Ω
Input Capacitance	C_{ISS}	V_{DS} = 50V, V_{GS} = 0V, f = 1MHz		130		pF
Output Capacitance	C_{OSS}			34		
Reverse Transfer Capacitance	C_{RSS}			5		
Turn-on Delay Time	$T_{D(ON)}$	V_{GEN} = 10V, R_L = 16.6Ω V_{DS} = 50V, R_G = 3Ω		4		ns
Rise Time	T_r			2.5		
Turn-off Delay Time	$T_{D(OFF)}$			12		
Fall Time	T_f			8		
Total Gate Charge	Q_G	V_{GS} = 10V, V_{DS} = 50V, I_D = 3A		3.5		nC
Gate to Source Charge	Q_{GS}			1.2		
Gate to Drain Charge	Q_{GD}			0.8		
Diode Recovery Time	T_{RR}	I_F = 3A, di/dt = 100A/us		15		ns
Diode Recovery Charge	Q_{RR}	I_F = 3A, di/dt = 100A/us		22		nC

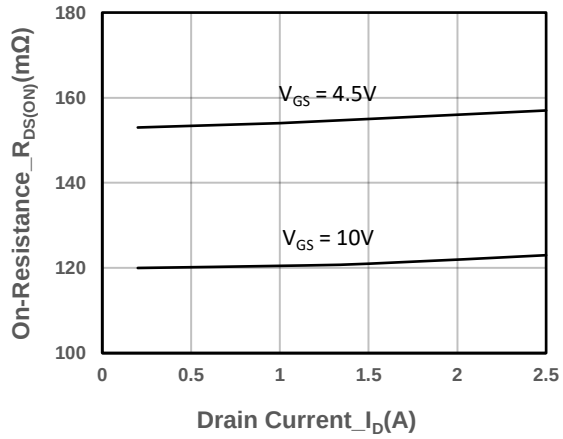
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



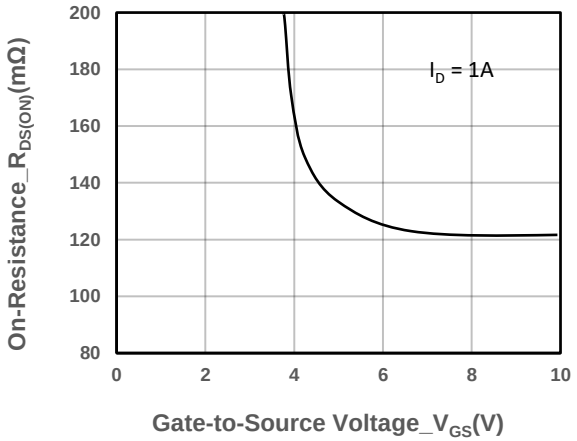
Output Characteristics



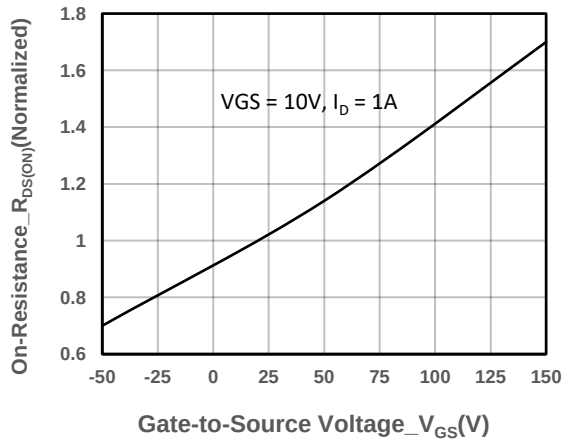
Transfer Characteristics



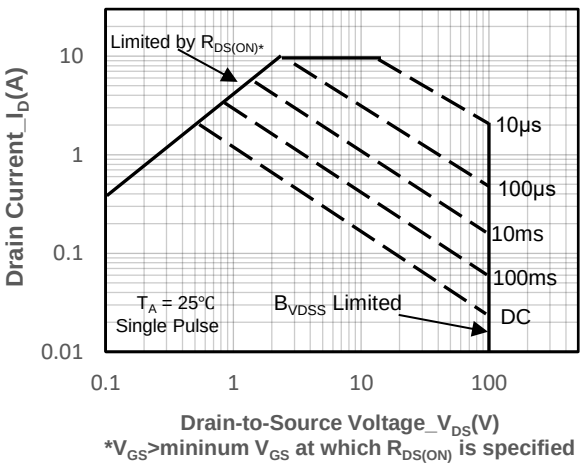
On-Resistance vs. Drain Current and Gate Voltag



On-Resistance vs. Gate-to-Source Voltage

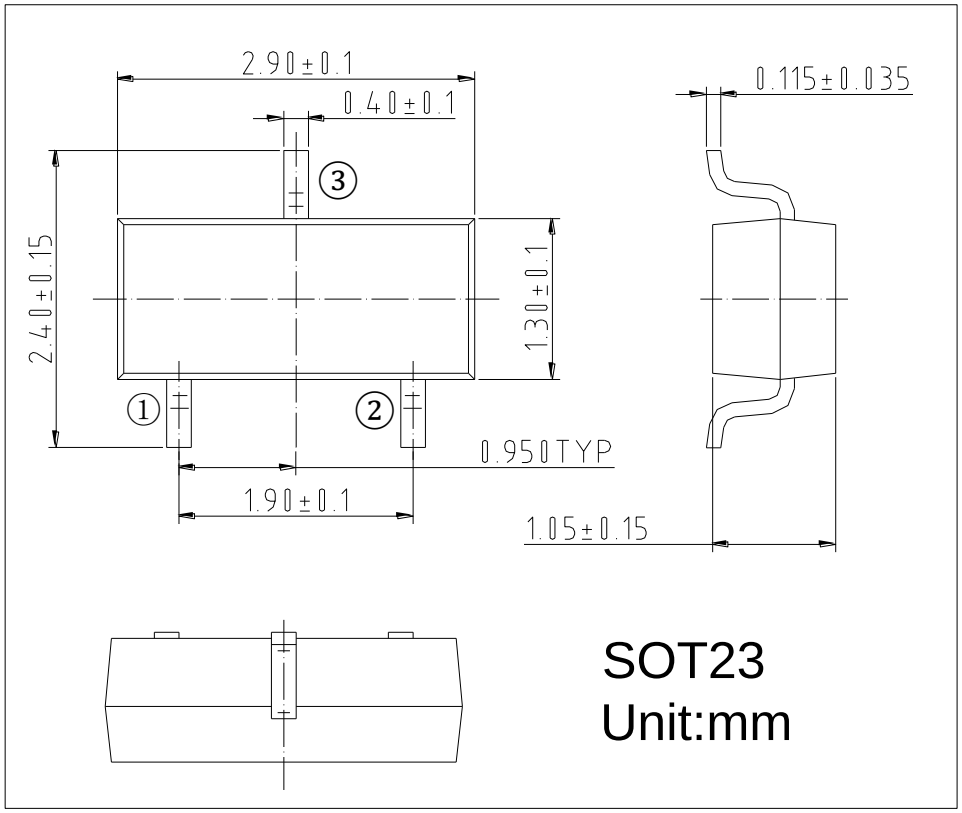


On-Resistance vs. Junction Temperature

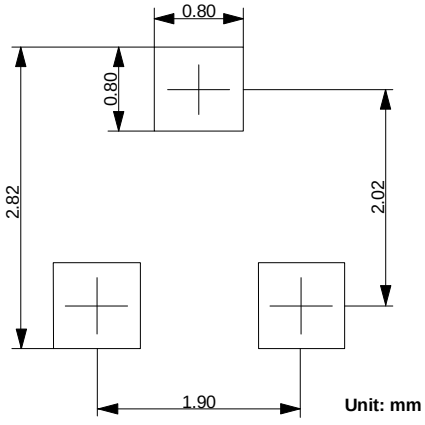


Safe Operating Area vs. Junction-to-Ambient

➢ Package Information



➢ Recommended Pad outline



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