SSC8LA0GT8

N-Channel Enhancement Mode MOSFET

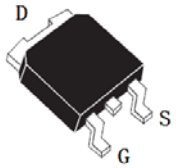
- **Features**

VDS	VGS	RDSon TYP	ID
100V	±20V	9mR@10V 13mR@4V5	60A

- **Applications**
  - Desktop Computer
  - Notebook

- **Pin Configuration**

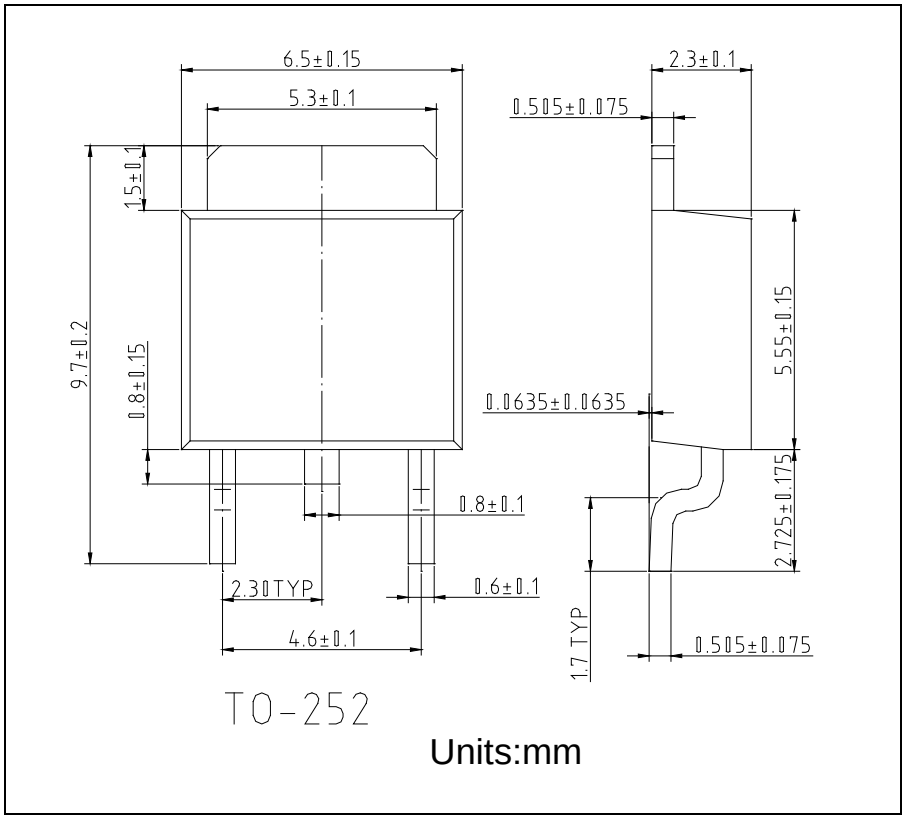
Top View



- **General Description**

This device uses advanced trench technology to provide excellent RDS(ON) and low gate charge. This device is suitable for use as a load switch or in PWM applications.

- **Package Information**



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

Parameter		Symbol	Ratings	Unit
Drain-Source Voltage		V_{DSS}	100	V
Gate-Source Voltage		V_{GSS}	±20	V
Operating and Storage Junction Temperature Range		T_J, T_{STG}	-55 to +150	°C
Mounted on PCB of Minimum Footprint	Pulsed Drain Current (Note 2)	I_{DM}	120	A
	Continuous Drain Current (Note 1)	I_D	60	A
		I_{DSM}	12	A
	Total Power Dissipation (Note 1)	P_D	2.5	W
Avalanche energy L=0.1mH C		E_{AS}	20	mJ
Mounted on PCB of 1in^2 Pad Area	Pulsed Drain Current (Note 2)	I_{DM}	150	A
	Continuous Drain Current (25°C)	I_D	80	A
	Total Power Dissipation (25°C)	P_D	30	W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 250 uA	100	--	--	V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS} = V_{GS}, I_D =250 uA	1.3	1.8	2.5	V
Gate–Body Leakage Current	I_{GSS}	V_{GS} = ± 20 V, V_{DS} = 0 V	--	--	±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =100V, V_{GS} = 0 V	--	--	1	uA
Drain–Source On–State Resistance	$R_{DS(ON)}$	V_{GS} = 10 V, I_D = 15A	--	9	12	mR
		V_{GS} = 4.5 V, I_D = 10A	--	13	15	
Forward Transconductance	G_{FS}	V_{DS} = 25V, I_D = 5 A	4	7.3	--	S
Diode Forward Voltage	V_{SD}	V_{GS} = 0 V, I_S = 10 A	--	--	1.2	V
Input Capacitance	C_{ISS}	V_{DS} = 25 V, V_{GS} = 0 V, f = 1.0 MHz	--	2710	--	pF
Output Capacitance	C_{OSS}		--	350	--	
Reverse Transfer Capacitance	C_{RSS}		--	185	--	
Turn–On Delay Time	$T_{D(ON)}$	V_{DS} = 30 V, R_L = 15R, I_{DS} = 2A, V_{GS} = 10V, R_{GEN}=3R	--	14		nS
Turn–Off Delay Tim	$T_{D(OFF)}$		--	40		

Notes:

1. DUT is mounted on a 1in^2 FR-4 board with 2oz. Copper in a still air environment at 25°C， the current rating is based on the DC（<10s） test conditions.
2. Repetitive rating, pulse width limited by junction temperature. 300us Pulse Drain Current Tested.

- **Typical Performance Characteristics**

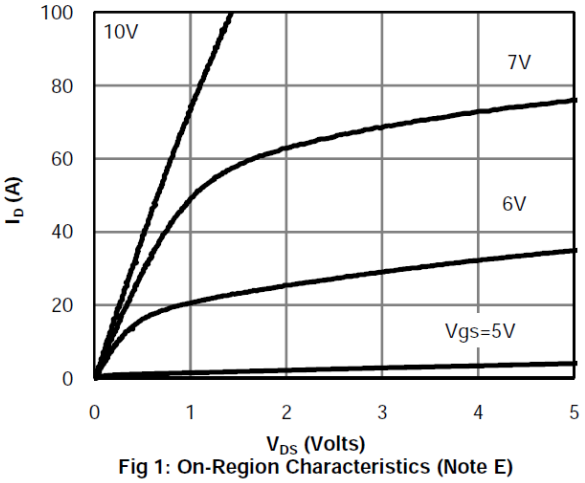


Fig 1: On-Region Characteristics (Note E)

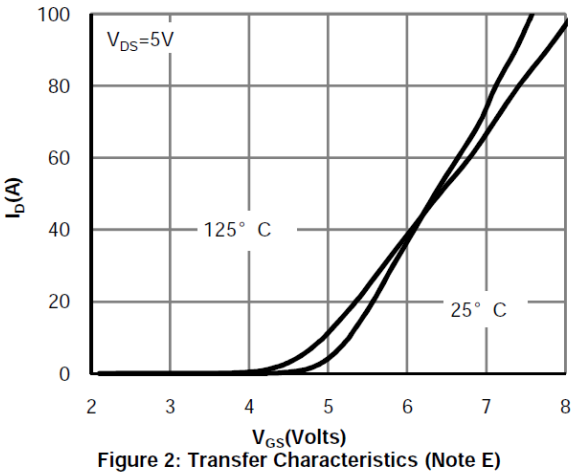


Figure 2: Transfer Characteristics (Note E)

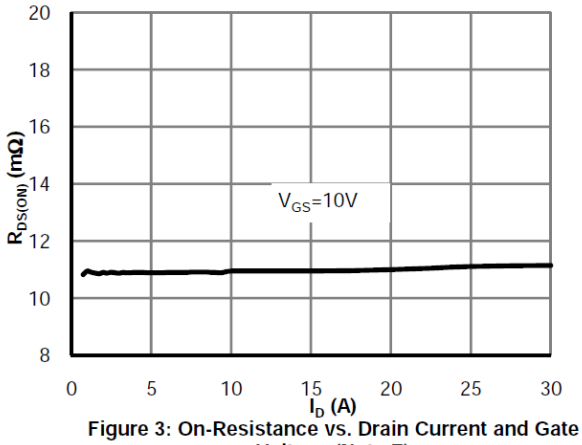


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

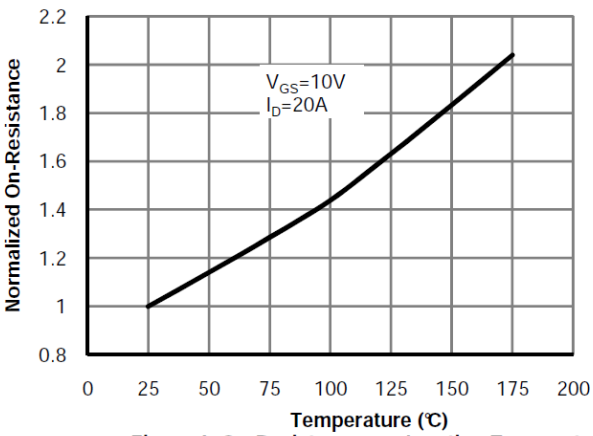


Figure 4: On-Resistance vs. Junction Temperature (Note E)

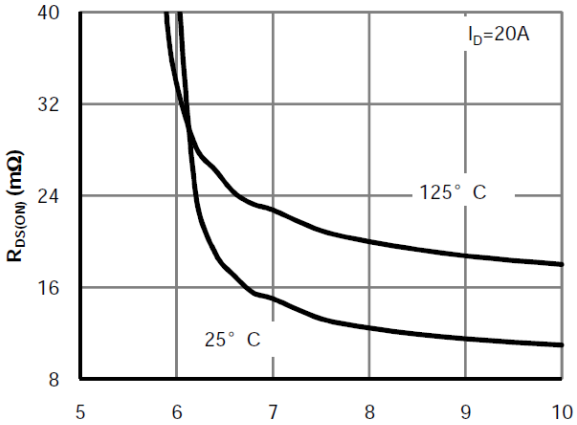


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

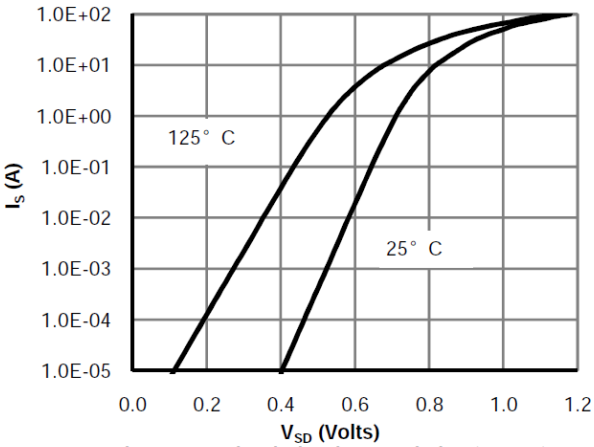


Figure 6: Body-Diode Characteristics (Note E)

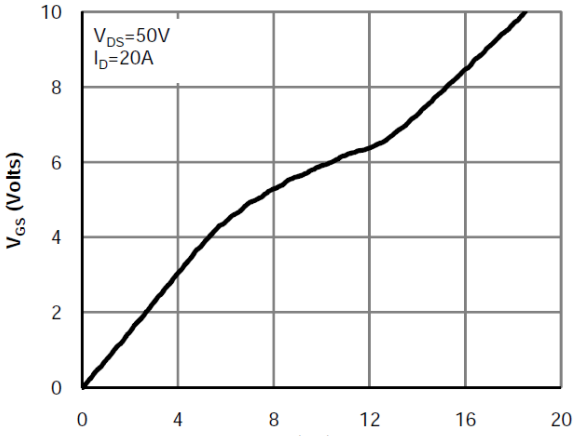


Figure 7: Gate-Charge Characteristics

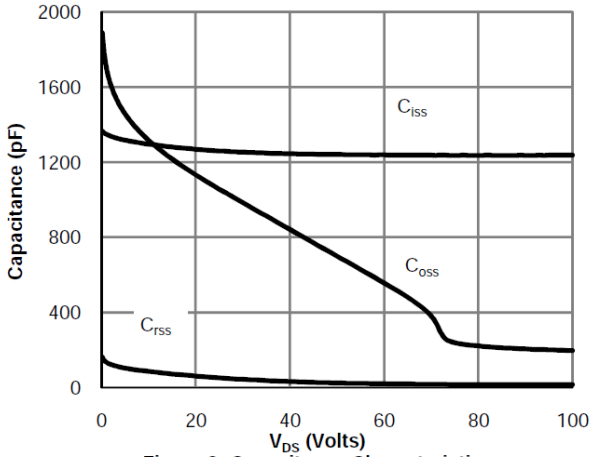


Figure 8: Capacitance Characteristics

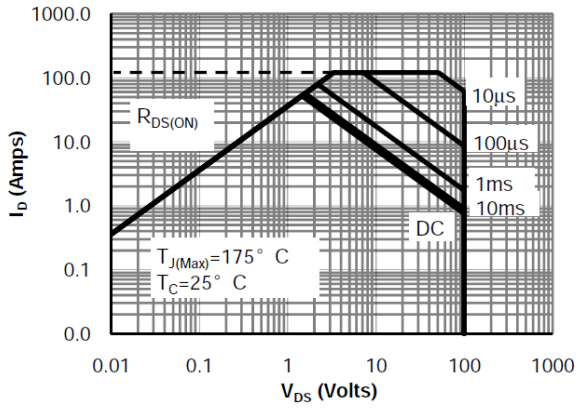


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

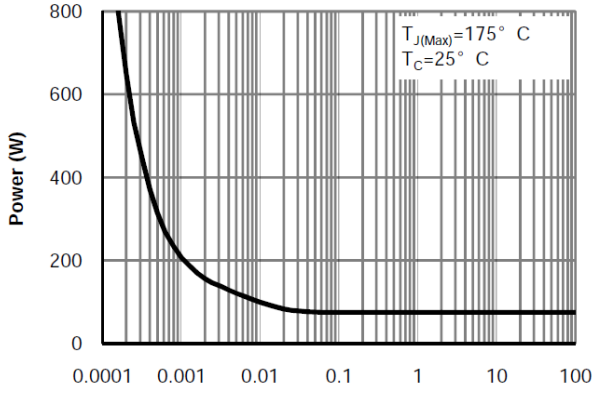


Figure 10: Single Pulse Power Rating Junction-to-Case for (Note F)

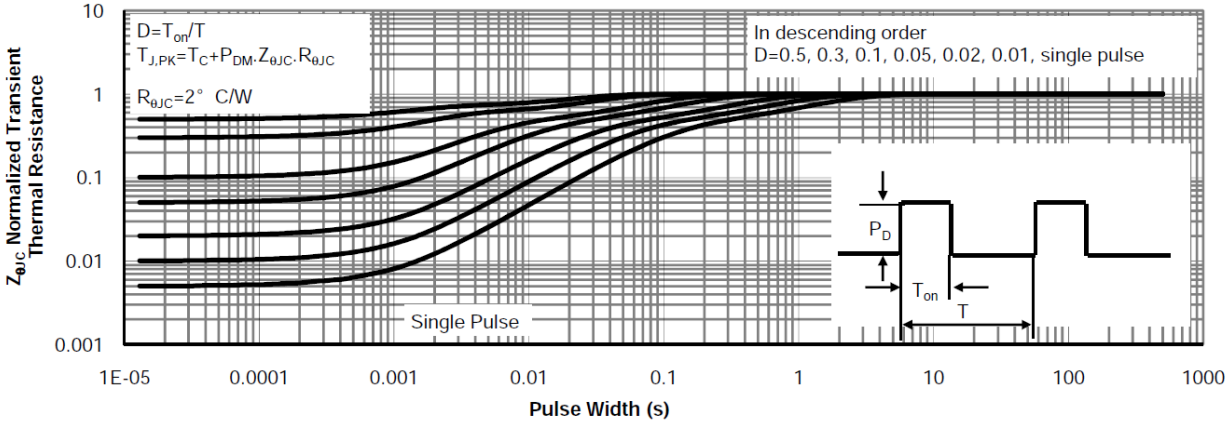


Figure 11: Normalized Maximum Transient Thermal Impedance (Note F)

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