SSC80K2GT3

N-Channel Enhancement Mode MOSFET

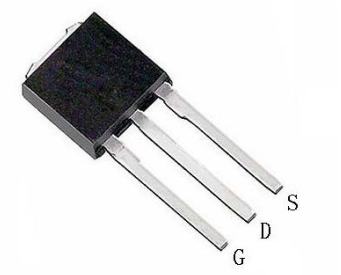
- **Features**

VDS	VGS	RDSon TYP	ID
200V	±20V	510mR@10V	2A
		520mR@4V5	

- **Applications**
  - Load Switch
  - Portable Devices
  - DCDC conversion

- **Pin Configuration**

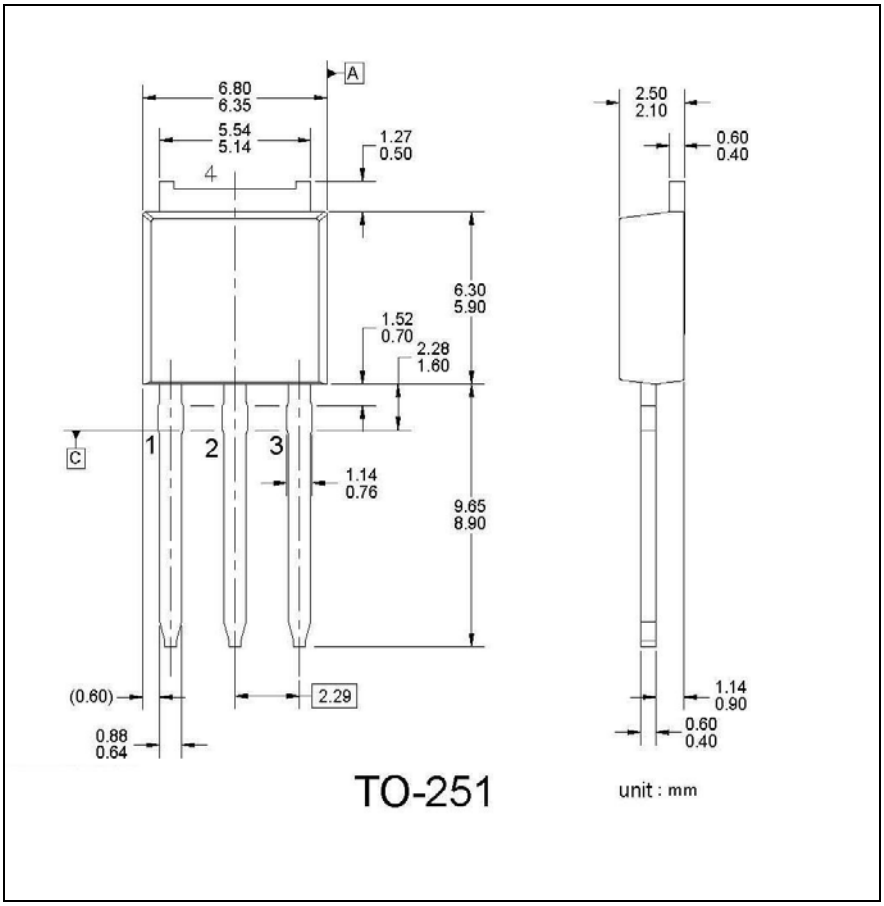
Top View



- **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 specified

Parameter	Symbol	N-channel	Unit
Drain-Source Voltage	V_{DSS}	200	V
Gate-Source Voltage	V_{GSS}	±20	V
Continuous Drain Current (Note 1)	I_D	2	A
Plused Drain Current (Note 2)	I_{DM}	8	A
Total Power Dissipation (Note 1)	P_D	3	W
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 250uA	200	--	--	V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS} = V_{GS}, I_D =250uA	1.2	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} = 200 V, V_{GS} = 0 V	--	--	1	uA
Drain–Source On–State Resistance	$R_{DS(ON)}$	V_{GS} = 10 V, I_D = 2 A	--	510	580	mR
		V_{GS} = 4.5 V, I_D = 1 A	--	520	580	
Diode Forward Voltage	V_{SD}	V_{GS} = 0 V, I_S =2 A	--	--	1.2	V
Input Capacitance	C_{ISS}	V_{DS} = 25 V, V_{GS} = 0 V, f = 1.0 MHz	--	580	--	pF
Output Capacitance	C_{OSS}		--	90	--	
Reverse Transfer Capacitance	C_{RSS}		--	3	--	
Turn–On Delay Time	$T_{D(ON)}$	V_{DS} = 100 V, R_L = 15 R, V_{GS} = 10 V, V_{GEN}=10 V	--	10	--	ns
Turn–Off Delay Tim	$T_{D(OFF)}$		--	15	--	

Note :

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（continuous） test conditions.
2. Repetitive rating, pulse width limited by junction temperature.

3. Typical Performance Characteristics

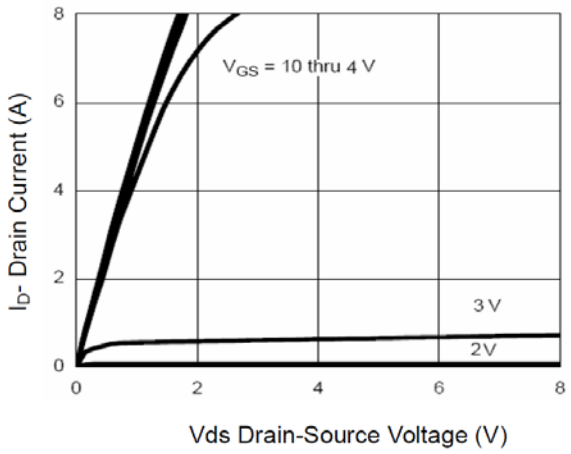


Figure 1 Output Characteristics

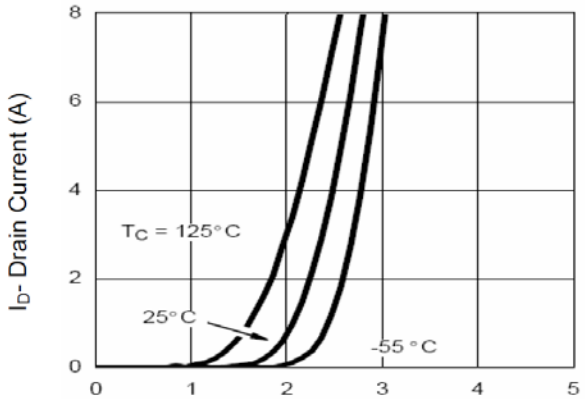


Figure 2 Transfer Characteristics

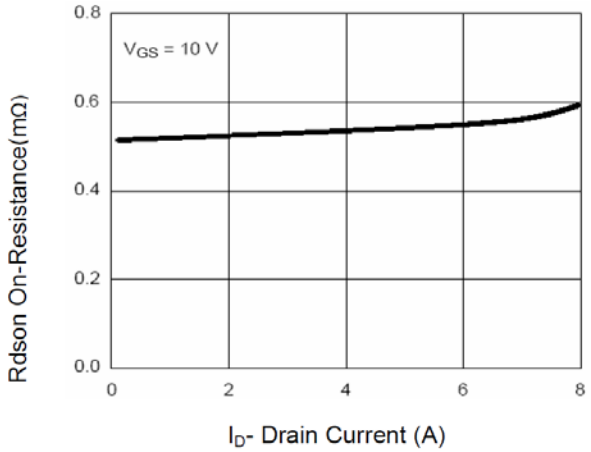


Figure 3 Rdson- Drain Current

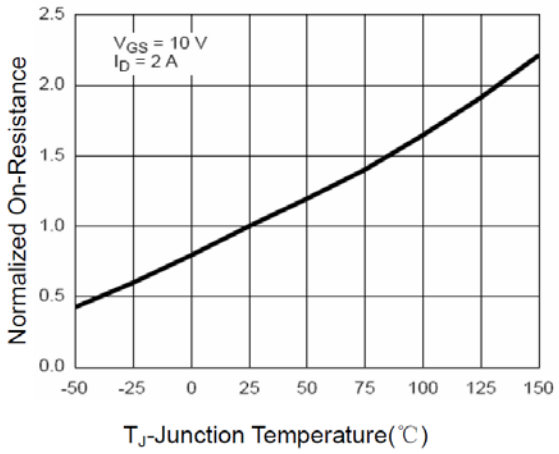


Figure 4 Rdson-JunctionTemperature

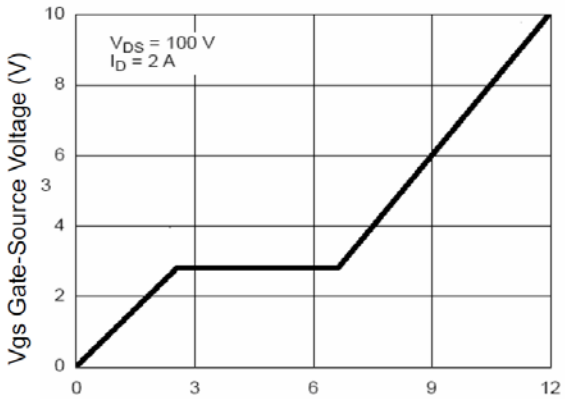


Figure 5 Gate Charge

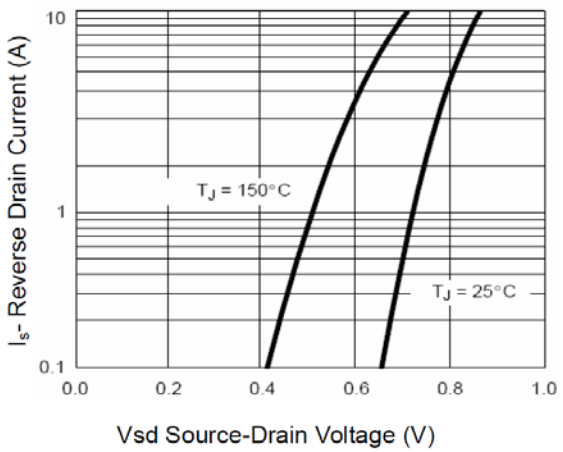


Figure 6 Source- Drain Diode Forward

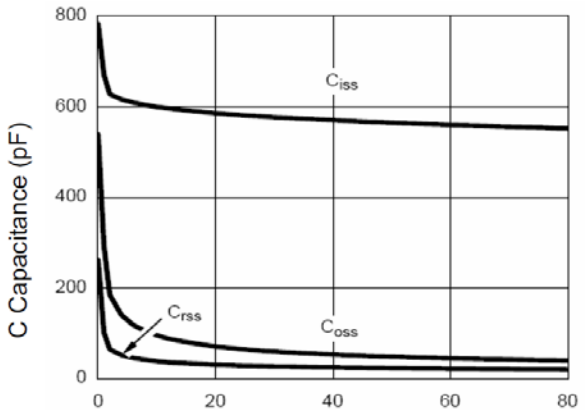


Figure 7 Capacitance vs Vds

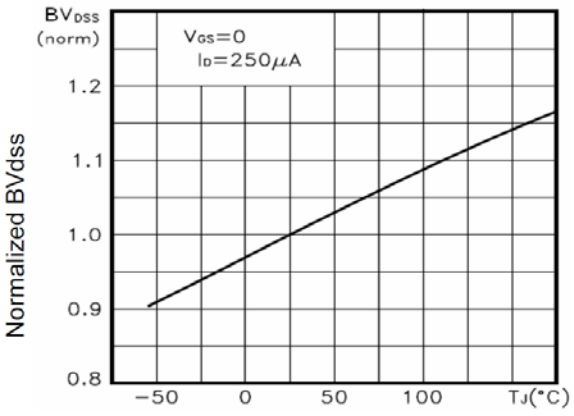


Figure 9 BV_{DSS} vs Junction Temperature

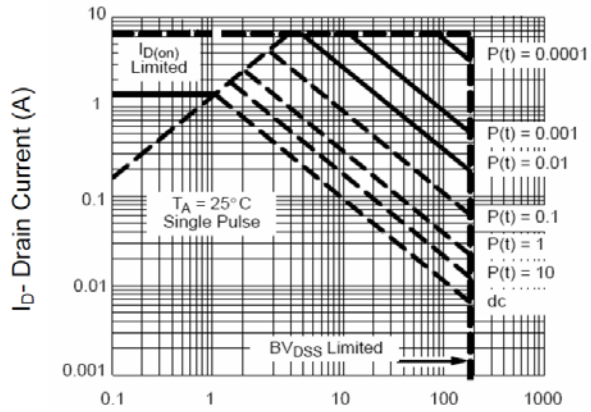


Figure 8 Safe Operation Area

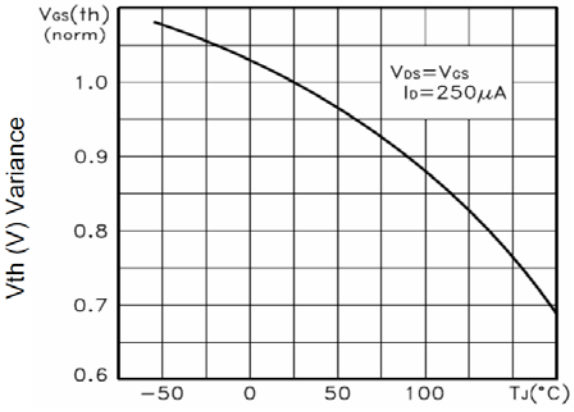


Figure 10 $V_{GS(th)}$ vs Junction Temperature

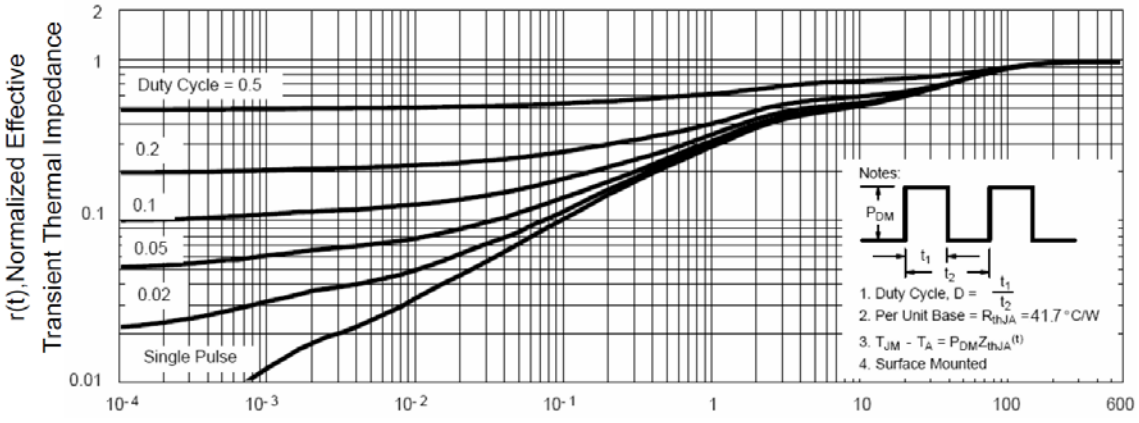


Figure 11 Normalized Maximum Transient Thermal Impedance

DISCLAIMER

AFSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. AFSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G,. OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.