



SSC80A4GS6

N-Channel Enhancement Mode MOSFET

➤ Features

V_{DS}	V_{GS}	$R_{DS(ON)}$ Typ.	I_D
100V	$\pm 20V$	240m Ω @10V	2.2A
		260m Ω @4V5	

➤ Description

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

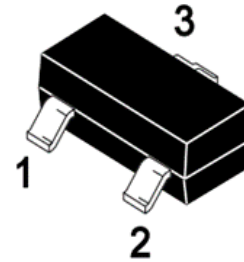
➤ Applications

- Intelligent Lighting
- Load Switch
- Portable Devices
- DCDC Conversion

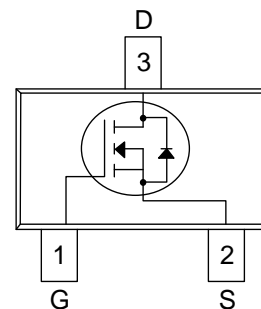
➤ Ordering Information

Device	Package	Shipping
SSC80A4GS6	SOT-23	3000/Reel

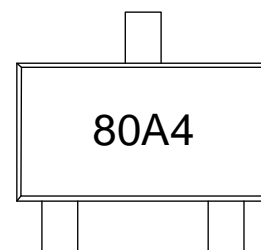
➤ Pin configuration



SOT-23



Pin Configuration (Top View)



Marking



➤ **Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ 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 ^a	2.2	A
I_{DM}	Pulsed Drain Current ^b	8.8	A
P_D	Power Dissipation ^c	1.76	W
T_J	Operation junction temperature	-55~150	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55~150	$^{\circ}\text{C}$

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

Symbol	Parameter	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance ^a	71	$^{\circ}\text{C}/\text{W}$

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 power dissipation 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 $T_{J(MAX)}=150^{\circ}\text{C}$, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.

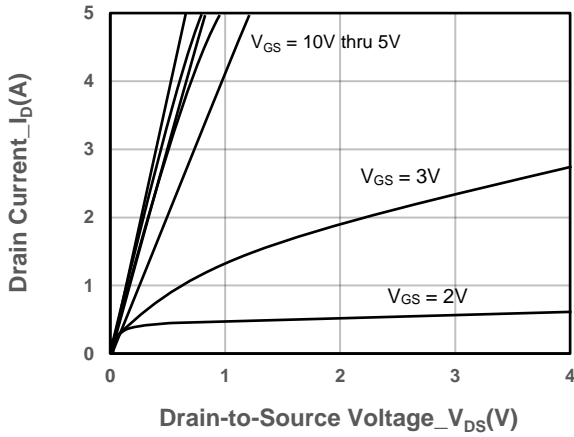


➤ **Electrical Characteristics (T_A=25°C unless otherwise noted)**

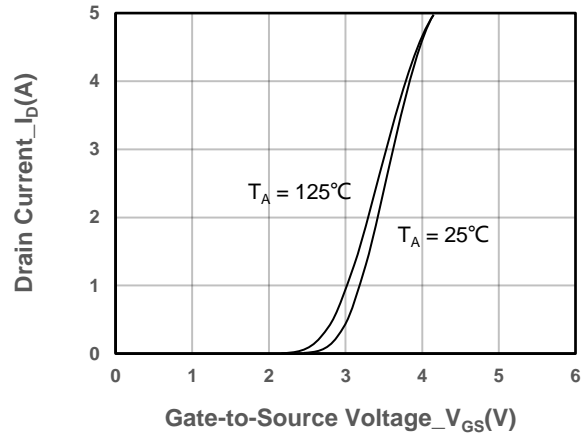
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	100			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250uA	1	1.5	2.5	V
Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = 10V, I _D = 2A		240	300	mΩ
		V _{GS} = 4.5V, I _D = 1A		260	330	
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
Forward Voltage	V _{SD}	V _{GS} = 0V, I _S = 1A			1.3	V
Input Capacitance	C _{ISS}	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz		320		pF
Output Capacitance	C _{OSS}			20		
Reverse Transfer Capacitance	C _{RSS}			14		
Turn-on Delay Time	T _{D(ON)}	V _{GS} = 10V, I _D = 1A, V _{DS} = 30V, R _G = 3Ω		14		ns
Rise Time	T _r			53		
Turn-off Delay Time	T _{D(OFF)}			17		
Fall Time	T _f			11		
Total Gate Charge	Q _G	V _{GS} = 10V, V _{DS} = 30V, I _D = 2A		5.2		nC
Gate to Source Charge	Q _{GS}			1.2		
Gate to Drain Charge	Q _{GD}			1.6		



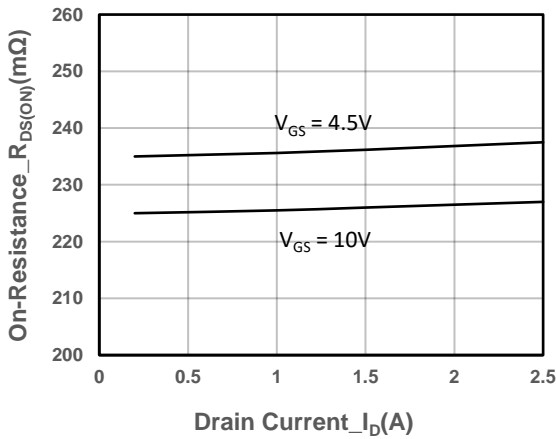
➤ **Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)**



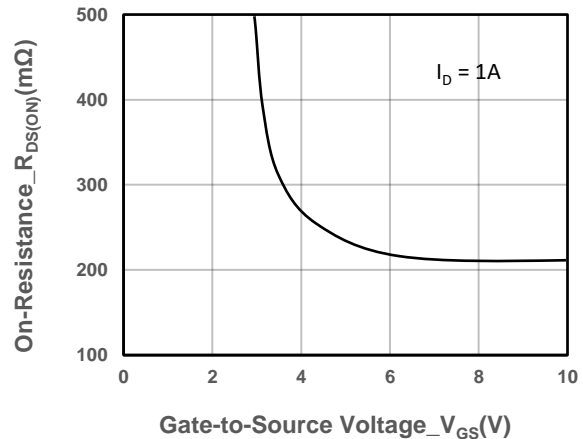
Output Characteristics



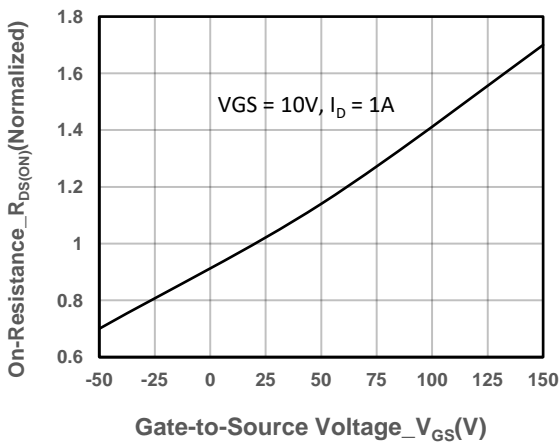
Transfer Characteristics



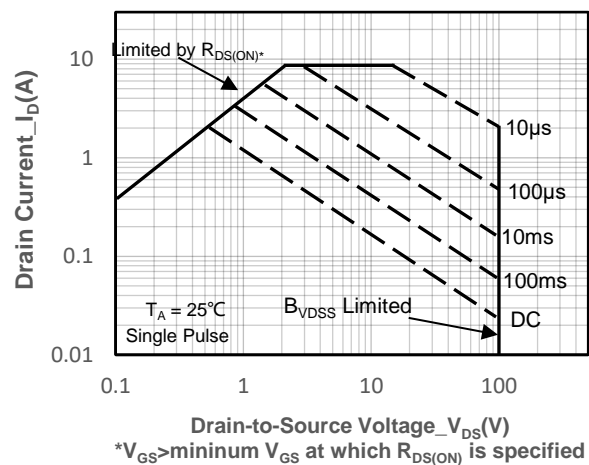
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

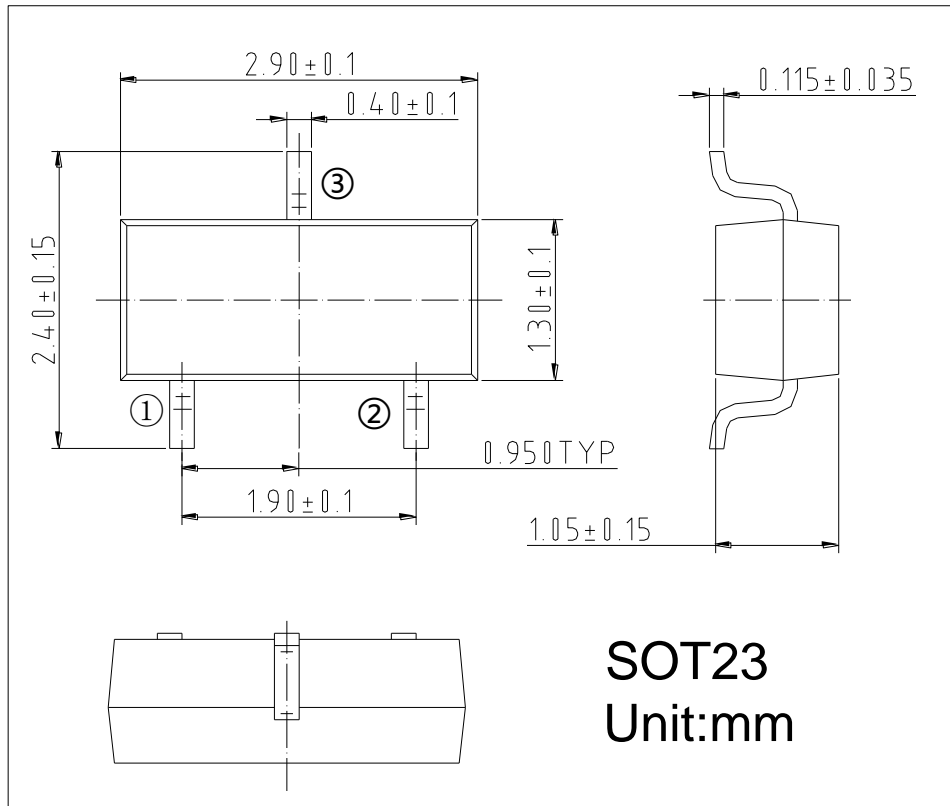


On-Resistance vs. Junction Temperature

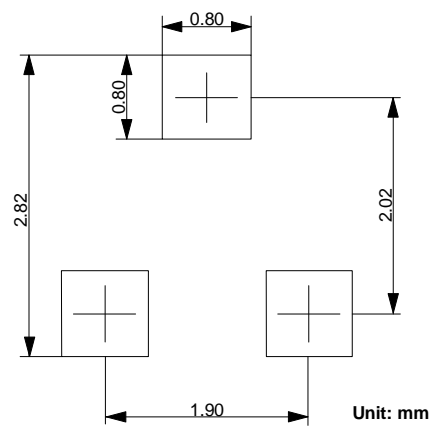


Safe Operating Area vs. Junction-to-Ambient

➤ Package Information



➤ Recommended Pad outline





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