

SSC8042GS6
N-Channel Enhancement Mode MOSFET

 ➤ **Features**

VDS	VGS	RDSON Typ.	ID
40V	±20V	30mR@10V	4A
		35mR@4V5	

 ➤ **Description**

This device uses advanced trench technology to provide excellent RDSON and low gate charge and operation with gate voltages as low as 2.5V. This device is suitable for use as a load switch or in PWM applications.

 ➤ **Applications**

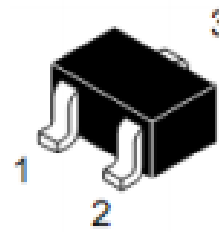
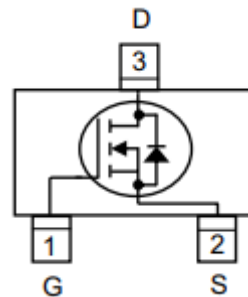
- Load Switch
- Portable Devices
- DCDC conversion

 ➤ **Ordering Information**

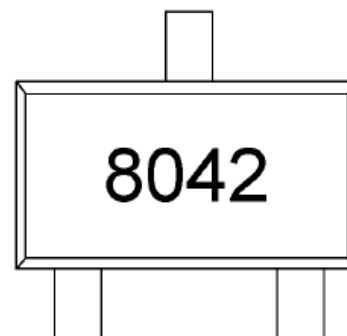
Device	Package	Shipping
SSC8042GS6	SOT23	3000/Reel

 ➤ **Pin configuration**

Top view



SOT23



Marking

➤ **Absolute Maximum Ratings**($T_A=25^{\circ}\text{C}$ 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	4	A
I_{DM}	Pulsed Drain Current	16	A
P_D	Power Dissipation	0.45	W
T_J	Operation junction temperature	-55 to 150	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55 to 150	$^{\circ}\text{C}$

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

Symbol	Parameter	Typical	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance		277	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		166	

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

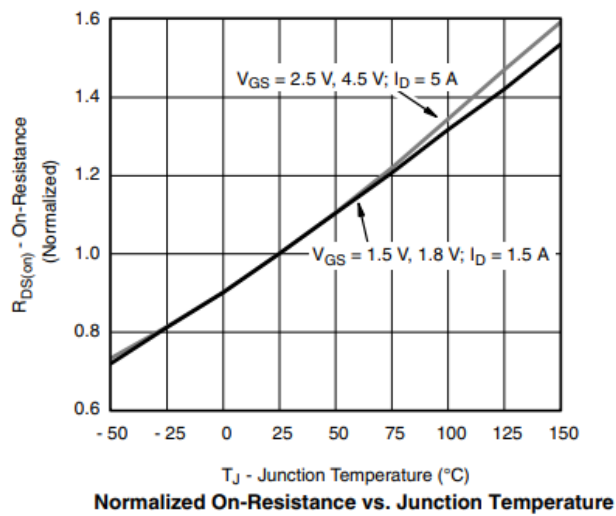
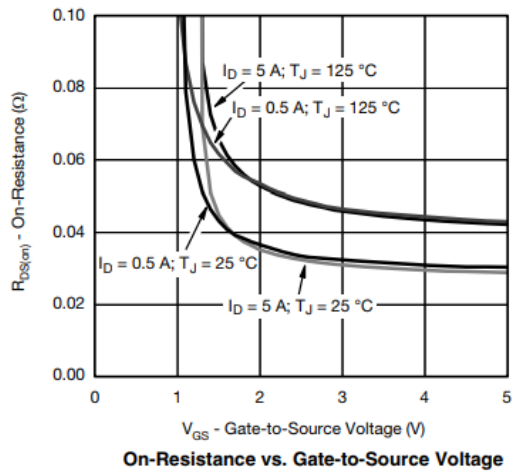
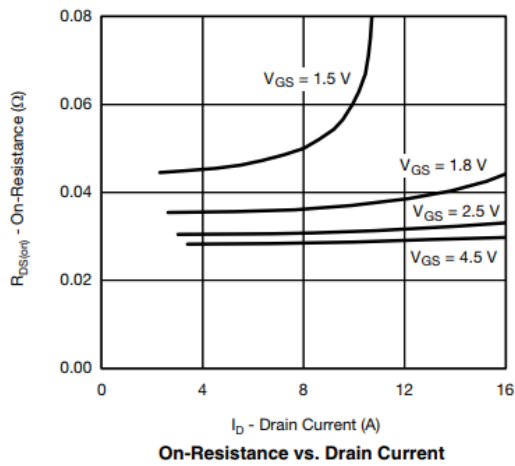
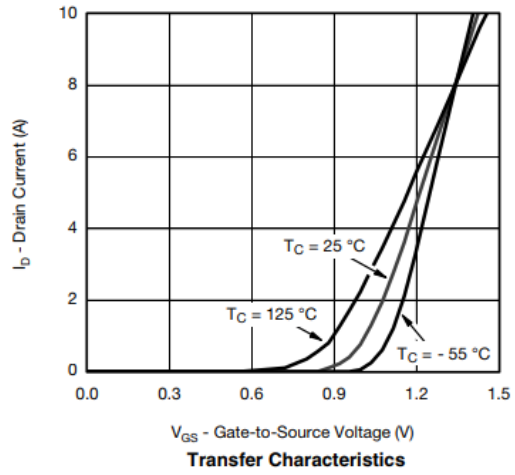
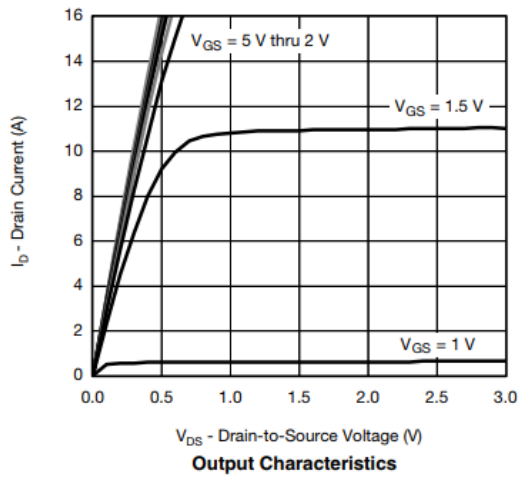
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0\text{V}, I_D=250\mu\text{A}$	40			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1		2	V
$R_{DS(on)}$	Drain-Source On- Resistance	$V_{GS}=10\text{V}, I_D=5\text{A}$		30	32	mR
		$V_{GS}=4.5\text{V}, I_D=4.5\text{A}$		35	37	

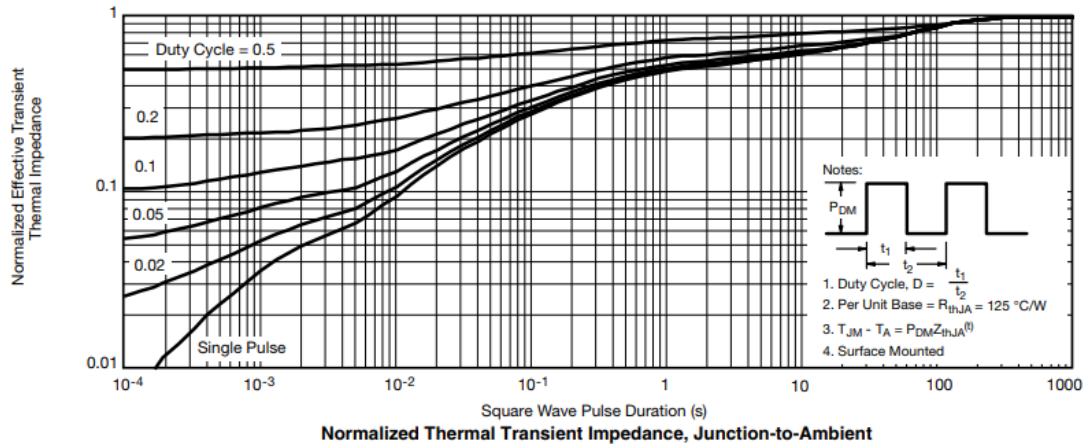
**SSC8042GS6**

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=32V, V_{GS}=0V$			1	μA
I_{GSS}	Gate-Source leak current	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
G_{FS}	Forward Transconductance	$V_{DS}=15V, I_D=5A$		18		S
V_{SD}	Forward Voltage	$V_{GS}=0V, I_S=1.7A$		0.75	1.2	V

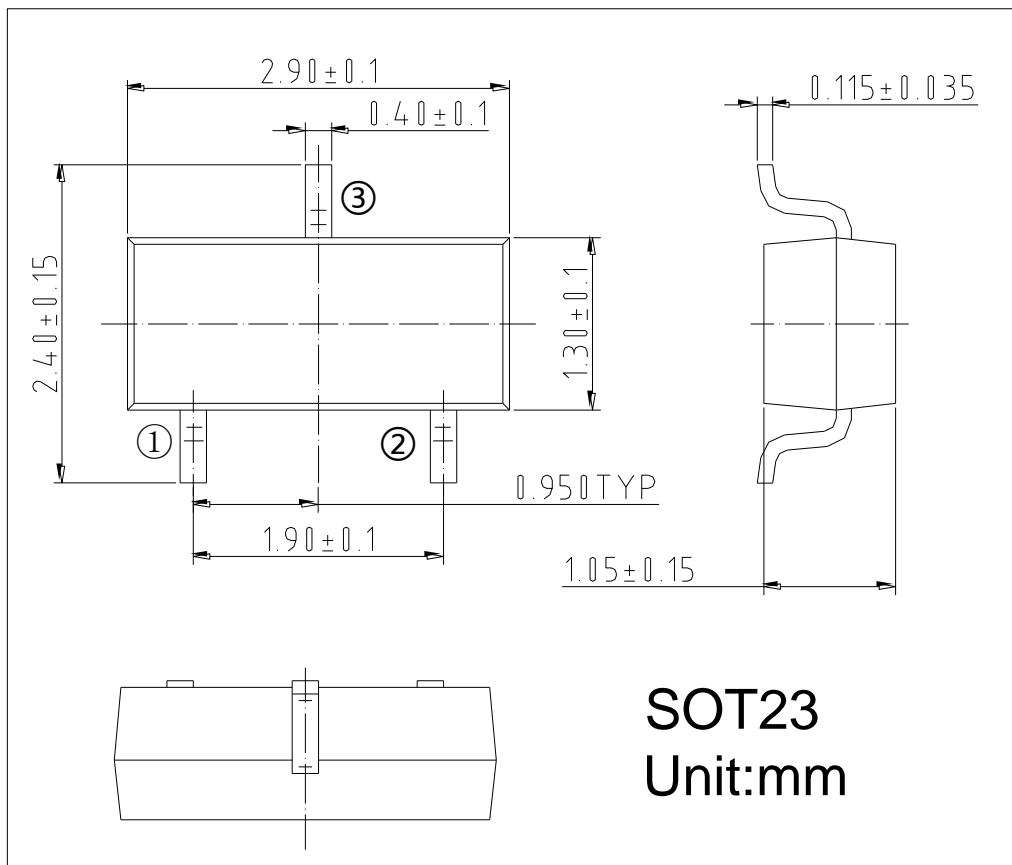
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
C_{iss}	Input Capacitance	$V_{DS}=15V, V_{GS}=0V,$ $F=1MHz$		450		pF
C_{oss}	Output Capacitance			97		
C_{rss}	Reverse Transfer Capacitance			75		
$T_{D(ON)}$	Turn-on delay time	$V_{GS}=10V,$ $V_{DS}=15V,$ $R_G=3R, R_L=2.3R$			18	ns
$T_{D(OFF)}$	Turn-off delay time				70	

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





➤ **Package Information**



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