SSC8032GS6

N-Channel Enhancement MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
30V	±20V	28mR@10V	4.3A
		40mR@4V5	

➢ Description

SSC8032GS6 uses advanced trench technology to provide excellent RDSON and low gate charge. The complementary MOSFETS may be used to form a level shifted high side switch, and for a host of other applications.

➢ Applications

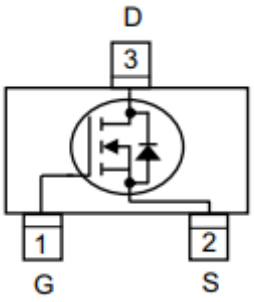
- Inverter
- DC-DC converter
- Half and Full Bridge Topology

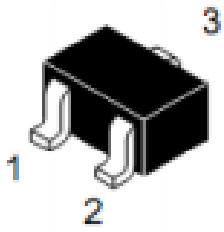
➢ Ordering Information

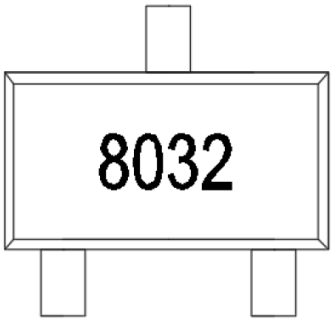
Device	Package	Shipping
SSC8032GS6	SOT23	3000/Reel

➢ Pin configuration

Top view







Marking

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

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	30	V
V_{GSS}	Gate-to-Source Voltage	±20	V
I_D	Continuous Drain Current [a]	4.3	A
I_{DM}	Pulsed Drain Current [b]	30	A
P_{DSM}	Power Dissipation [a]	1.4	W
P_D	Power Dissipation [c]	0.7	W
T_J	Operation junction temperature	-55 to 150	℃
T_{STG}	Storage temperature range	-55 to 150	℃

➢ Thermal Resistance Ratings(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Typical	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]		190	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		95	

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 current rating is based on the t≤ 10s thermal resistance rating.

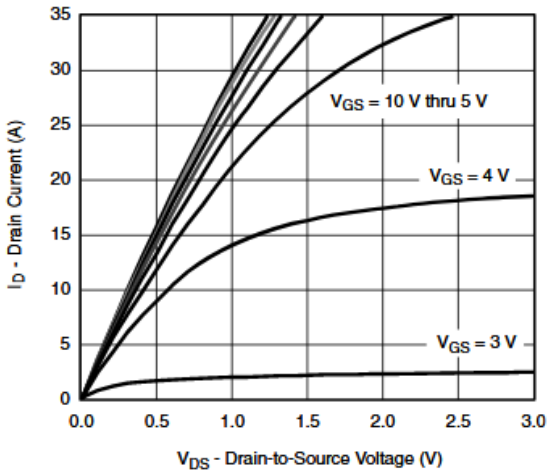
b. Repetitive rating, pulse width limited by junction temperature.

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.

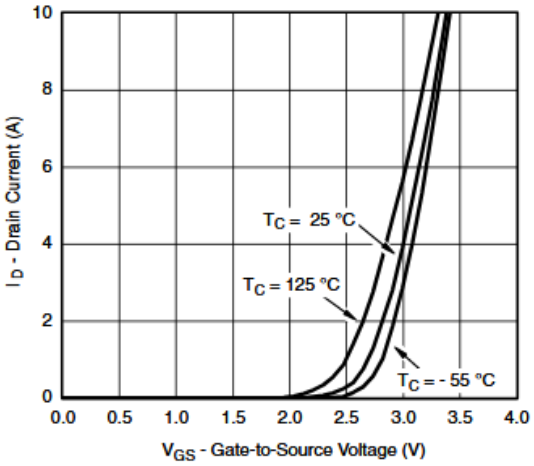
➢ Electronics Characteristics(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V , ID=250uA	30			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS , ID=250uA	1	1.5	2	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=10V , ID=3.8A		28	38	mR
		VGS=4.5V , ID=3A		40	55	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=24V , VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±20V , VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=5V , ID=3.6A		11		S
V_{SD}	Forward Voltage	VGS=0V , IS=1.1A		0.78	1.3	V
Ciss	Input Capacitance	VDS=15V , VGS=0V, f=1MHZ		210		pF
Coss	Output Capacitance			44		
Crss	Reverse Transfer Capacitance			16		
Qg	Total Gate Charge	VDS=15V , VGS=10V, ID=3.8A		6		nC
Qgs	Gate Source Charge			1.1		
Qgd	Gate Drain Charge			1.5		
$T_{D(ON)}$	Turn-on delay time	VDS=15V, VGS=10V, RL=10R, RGEN=6R		11		ns
Tr	Rise time			55		
$T_{D(OFF)}$	Turn-off delay time			12		
Tf	Fall time			22		

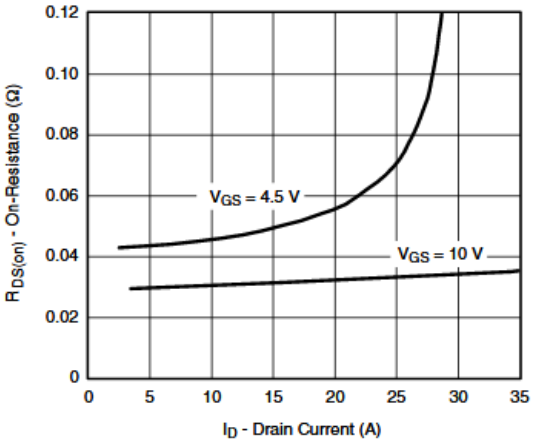
➢ N-Channel Typical Characteristics(T_A=25℃ unless otherwise noted)



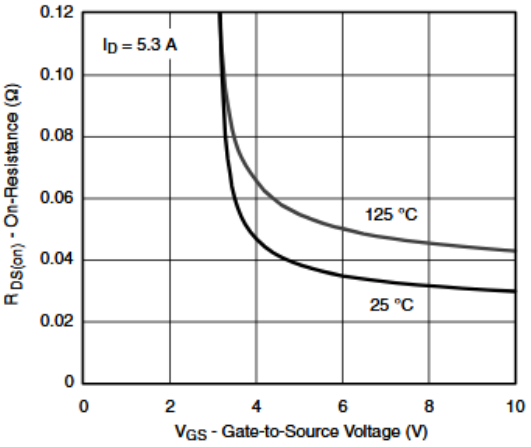
Output Characteristics



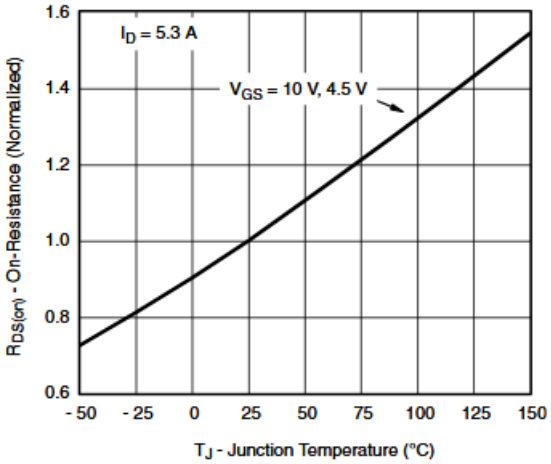
Transfer Characteristics



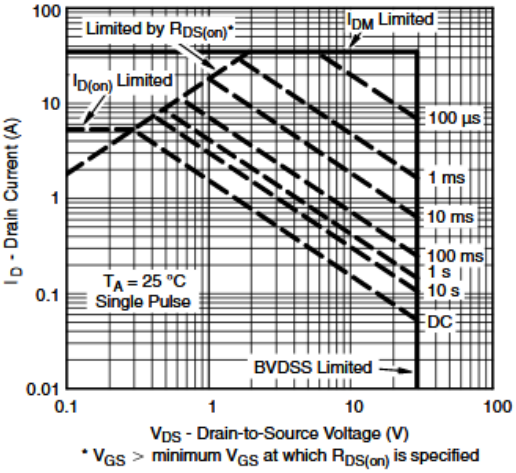
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

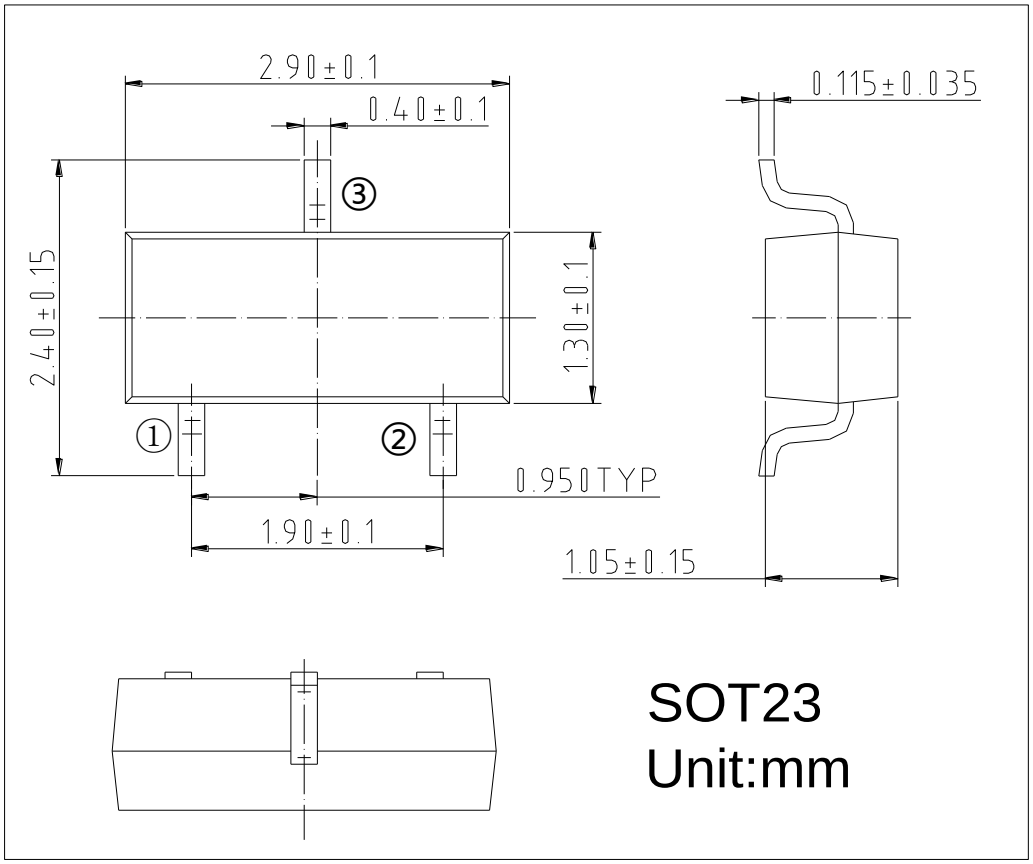


On-Resistance vs. Junction Temperature



Safe Operating Area, Junction-to-Ambient

➢ Package Information



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