SSC8064GS6

N-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
60V	±20V	78mR@10V	3A
		84mR@4V5	

➢ Description

This device is a N-Channel enhancement mode MOSFET which is produced with high cell density and DMOS trench technology. This device is suitable for use in battery powered system, power switch and portable devices.

➢ Applications

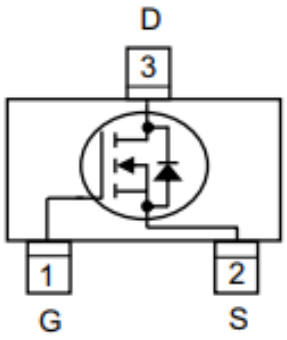
- Load Switch
- Portable Devices
- Battery Powered System

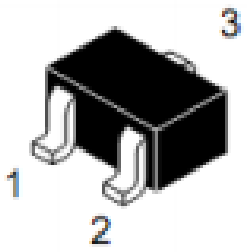
➢ Ordering Information

Device	Package	Shipping
SSC8064GS6	SOT23	3000/Reel

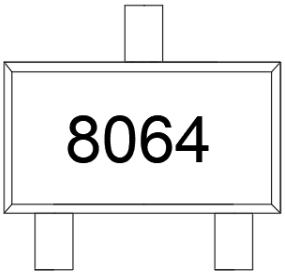
➢ Pin configuration

Top view





SOT23



Marking

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

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	60	V
V_{GSS}	Gate-to-Source Voltage	±20	V
I_D	Continuous Drain Current [a]	3	A
I_{DM}	Pulsed Drain Current [b]	12	A
P_D	Power Dissipation[a]	1.0	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	Ratings	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance [a]	116.5	℃/W

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.

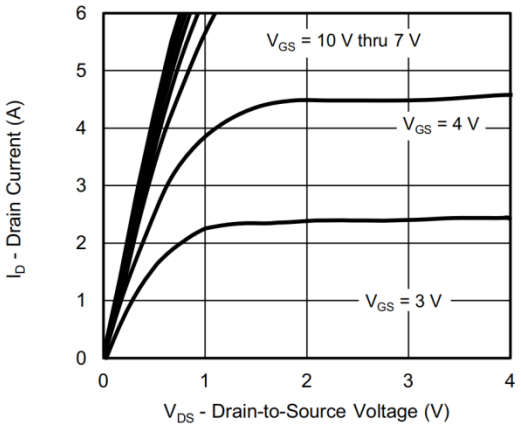
b. Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}$=150°C.

c. The power dissipation P_D is based on $T_{J(MAX)}$=150°C, using steady state junction-to-ambient thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.

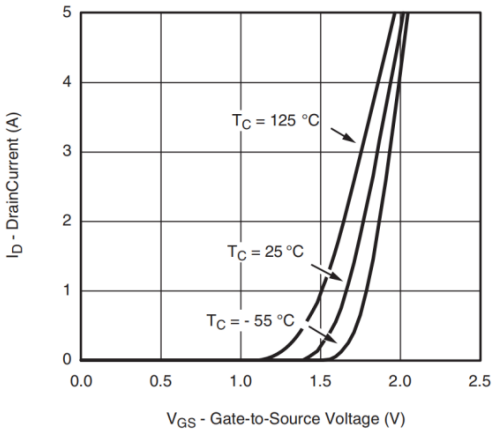
➢ Electronics Characteristics(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V, ID=250uA	60			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS, ID=250uA	1.0	1.4	2.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=10V, ID=3A		76	100	mΩ
		VGS=4.5V, ID=3A		84	120	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=60V, VGS=0V			1	uA
I_{GSS}	Gate-Source leak current	VGS=±20V, VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=5V, ID=3A		5		S
V_{SD}	Forward Voltage	VGS=0V, IS=3A		0.8	1.4	V
Rg	Gate Resistance	VGS=0V, f=1MHz		6.0		Ω
Ciss	Input Capacitance	VDS=30V, VGS=0V, f=1MHz		402		pF
Coss	Output Capacitance			35		
Crss	Reverse Capacitance			24		
$T_{D(ON)}$	Turn-on delay time	VDS=30V, VGEN=10V, RL=10Ω RG=3Ω		3.3		ns
Tr	Rise Time			3.0		
$T_{D(OFF)}$	Turn-off delay time			22		
Tf	Fall Time			7		
Qg	Total Gate charge	VGS=10V, VDS=30V ID=3A		8.2		nC
Qgs	Gate Source charge			1.0		
Qgd	Gate Drain charge			1.5		
Trr	Diode Recovery Time	IF=3A, di/dt=100A/us, VR=30V		19.5		ns
Qrr	Diode Recovery Charge	IF=3A, di/dt=100A/us, VR=30V		11.5		nC

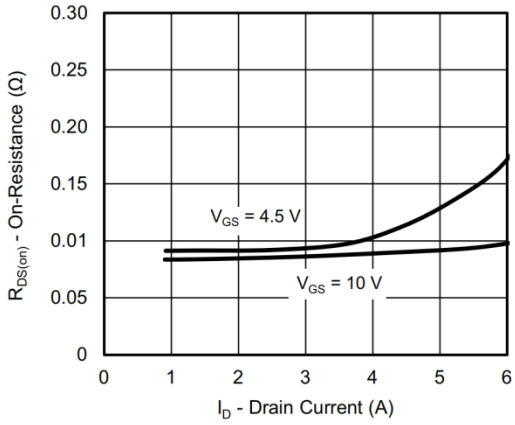
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



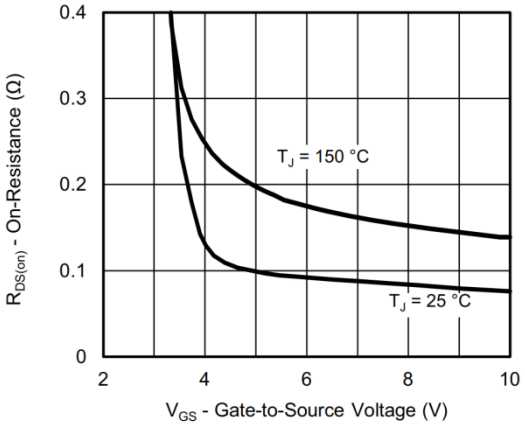
Output Characteristics



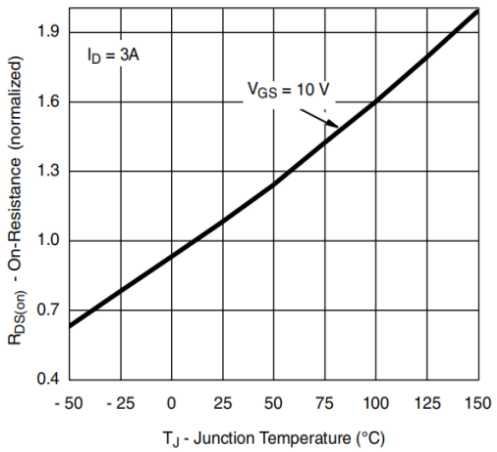
Transfer Characteristics



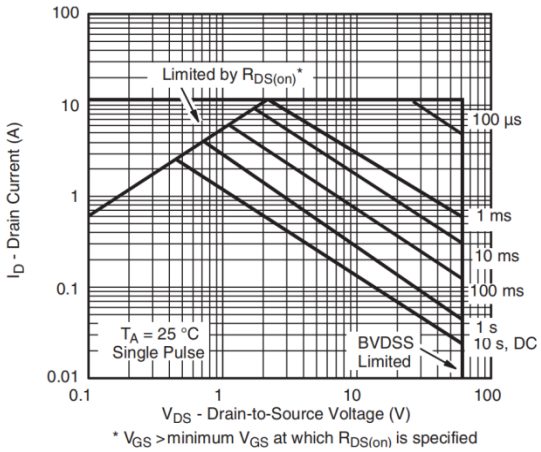
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Gate-to-Source Voltage

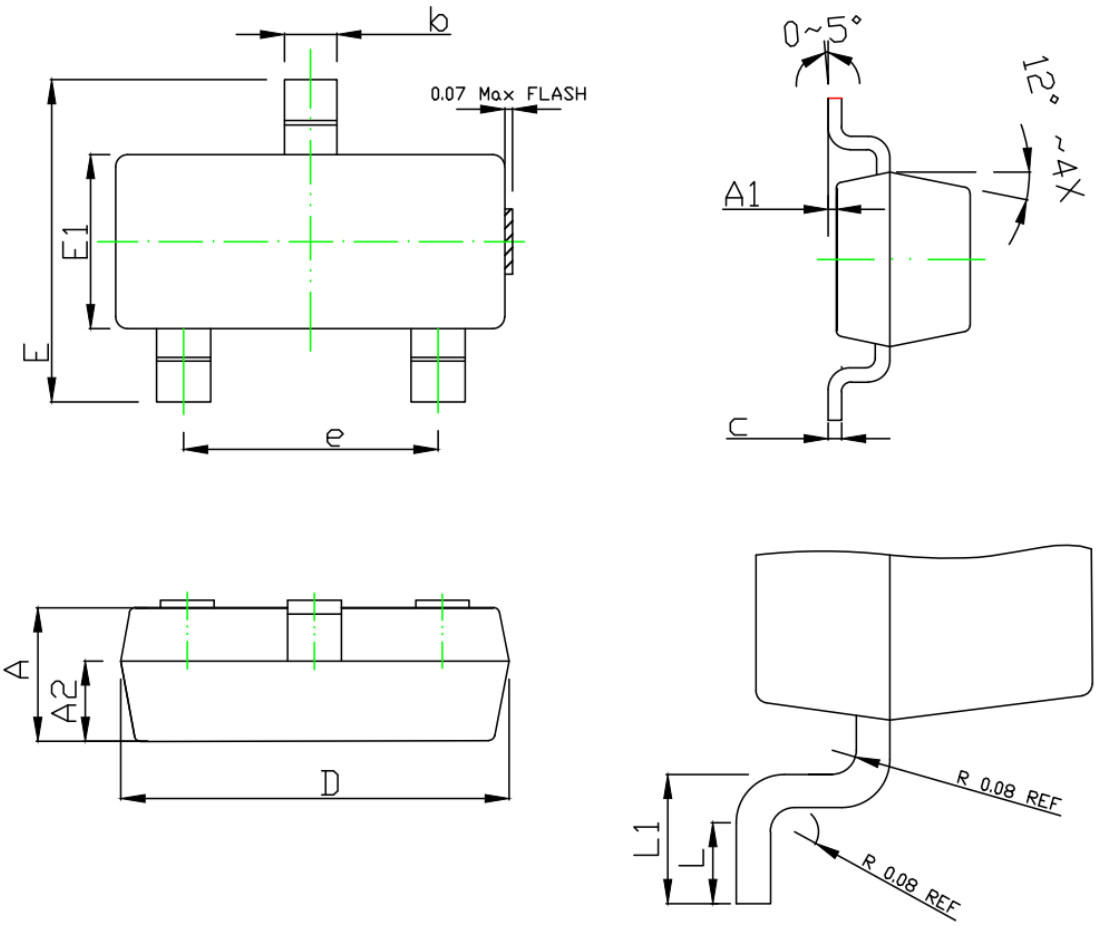


On-Resistance vs. Junction Temperature



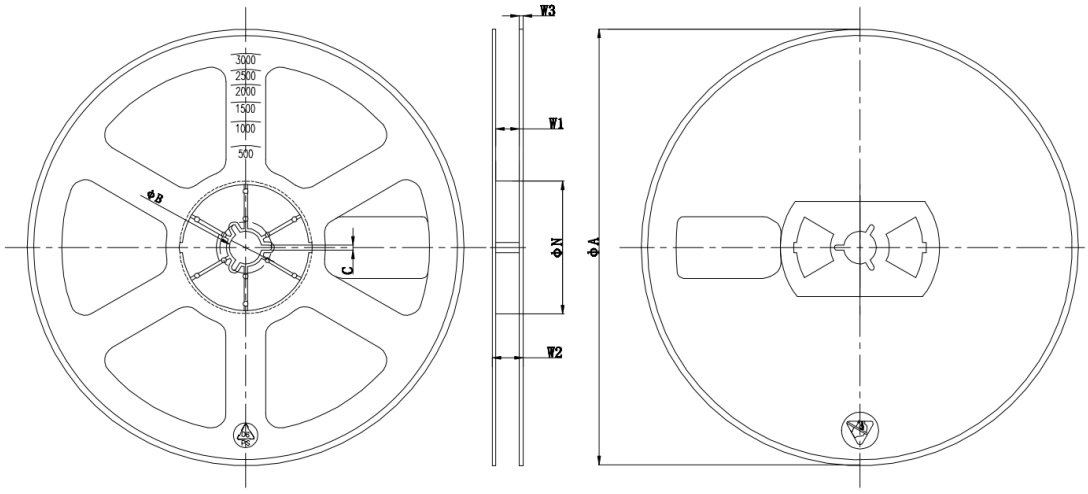
Safe Operating Area, Junction-to-Ambient

➢ Package Information

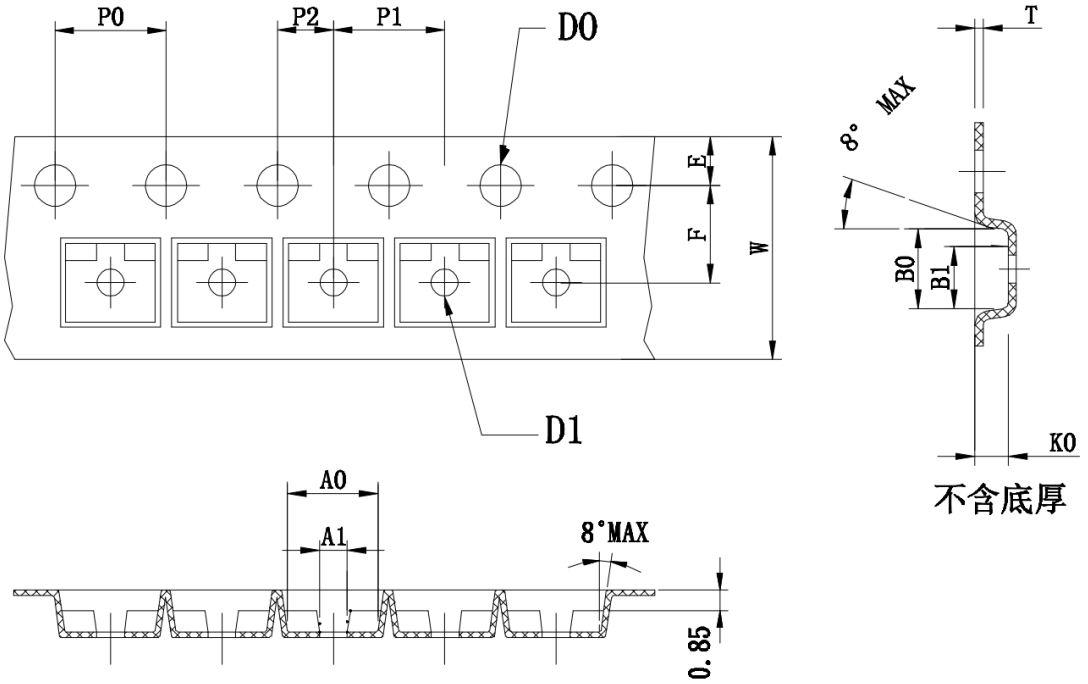


SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.95	1.00	1.05
A1	0.01	0.05	0.10
b	0.35	0.40	0.45
c		0.11 BSC	
D	2.80	2.90	3.00
E	2.30	2.40	2.50
E1	1.20	1.30	1.40
e		1.90 BSC	
L	0.20	-	-
L1	0.30	0.40	0.50
A2		0.60 REF	

➢ Tape and Reel



ΦA	ΦN	ΦB	C	W1	W2	W3
178±2	54±2	13.2±0.3 0.2	2.2±0.3	9.5±1	13max	1.4±0.4



Symbol	A0	A1	B0	B1	K0	D0	D1	P0
Spec	3.15±0.10	1.15±0.10	2.80±0.10	2.15±0.10	1.30±0.10	1.55±0.10	1.10±0.10	4.00±0.10
Symbol	P1	W	E	P2	T	10*P0	F	
Spec	4.00±0.10	8.00±0.10	1.75±0.10	2.00±0.10	0.21±0.02	40.00±0.10	3.50±0.10	

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