SSC8023GS6

P-Channel Enhancement Mode MOSFET

➢ Features

VDS	VGS	RDSON Typ.	ID
-20V	±12V	65mR@-4V5	-3A
		90mR@-2V5	

➢ Description

This device is produced with high cell density DMOS trench technology, which is especially used to minimize on-state resistance. This device particularly suits low voltage applications such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation are needed in a very small outline surface mount package.

➢ Applications

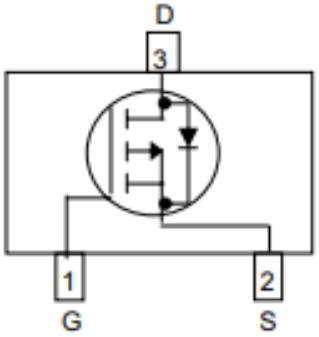
- Load Switch
- Portable Devices
- DCDC conversion

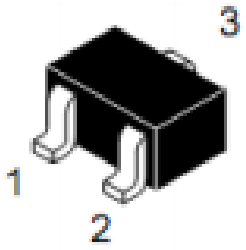
➢ Ordering Information

Device	Package	Shipping
SSC8023GS6	SOT-23	3000/Reel

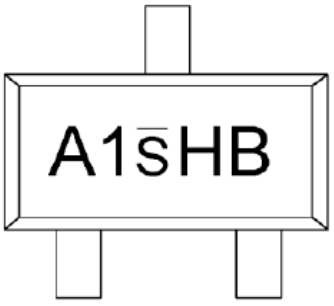
➢ Pin configuration

Top view





SOT-23



Marking

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

Symbol	Parameter	Ratings	Unit
V_{DSS}	Drain-to-Source Voltage	-20	V
V_{GSS}	Gate-to-Source Voltage	±12	V
I_D	Continuous Drain Current [a]	-3	A
I_{DM}	Pulsed Drain Current [b]	-20	A
P_D	Power Dissipation [c]	0.8	W
P_{DSM}	Power Dissipation [a]	0.42	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]		300	℃/W
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		160	

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.

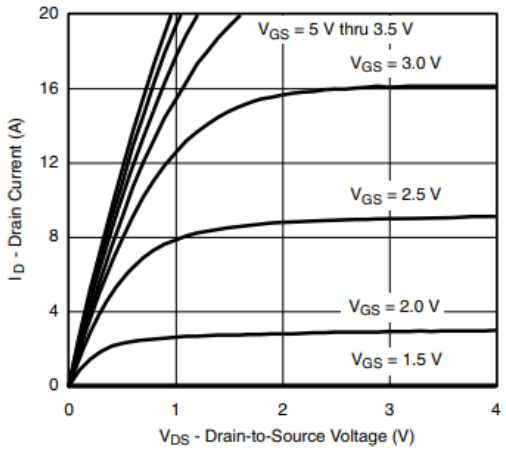
b. Repetitive rating, pulse width limited by junction temperature.

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.

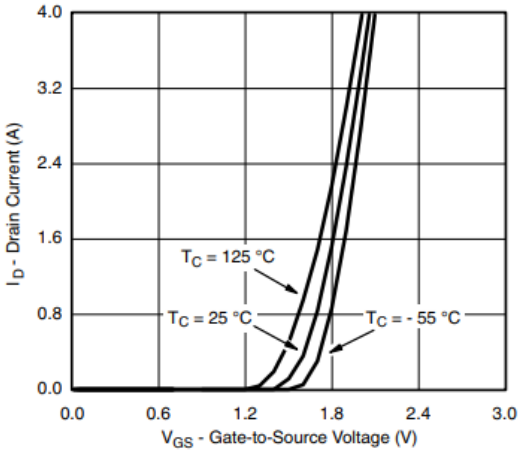
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V , ID=-250uA	-20			V
$V_{GS\ (th)}$	Gate Threshold Voltage	VDS=VGS , ID=-250uA	-0.45	-0.75	-1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	VGS=-4.5V , ID=-2.8A		65	90	mR
		VGS=-2.5V , ID=-2A		90	140	
I_{DSS}	Zero Gate Voltage Drain Current	VDS=-20V , VGS=0V			-1	uA
I_{GSS}	Gate-Source leak current	VGS=±12V , VDS=0V			±100	nA
G_{FS}	Transconductance	VDS=-5V , ID=-2.8A		6.5		S
V_{SD}	Forward Voltage	VGS=0V , IS=-1.6A	-0.5		-1.2	V
Ciss	Input Capacitance	VDS=-6V, VGS=0V, f=1MHz		415		pF
Coss	Output Capacitance			223		
Crss	Reverse Transfer Capacitance			87		
$T_{D(ON)}$	Turn-on delay time	VGS=-6V, VGEN=-4.5V, RL=6R, RG=6R,ID=-1.0A		13		ns
Tr	Rise time			10		
$T_{D(OFF)}$	Turn-off delay time			42		
Tf	Fall time			14		

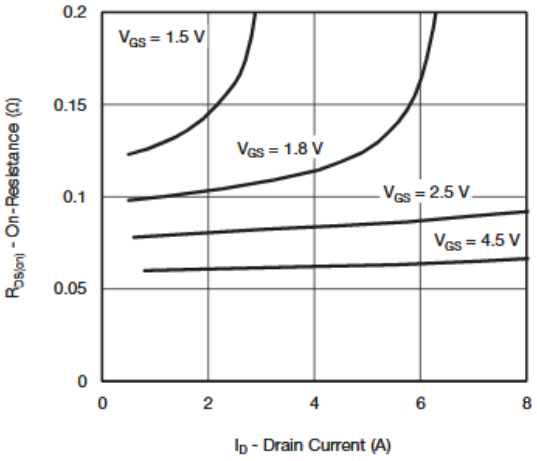
➢ Typical Characteristics(T_A=25℃ unless otherwise noted)



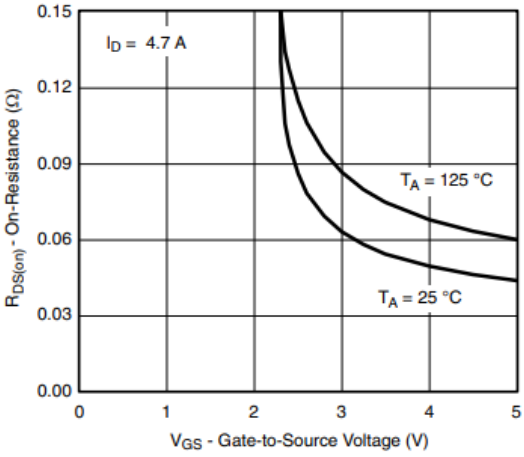
Output Characteristics



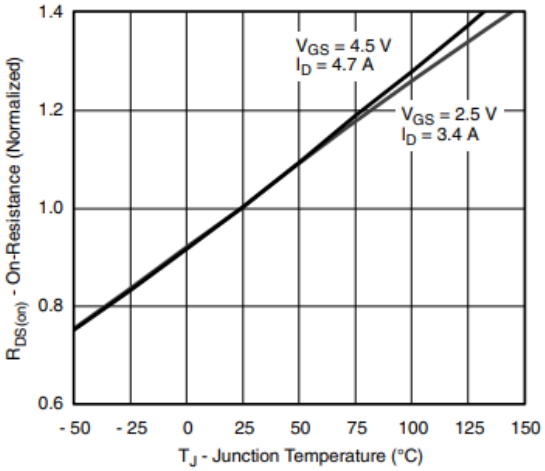
Transfer Characteristics



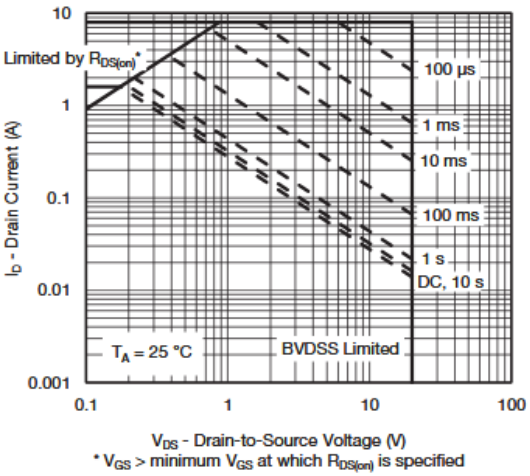
On-Resistance vs. Drain Current



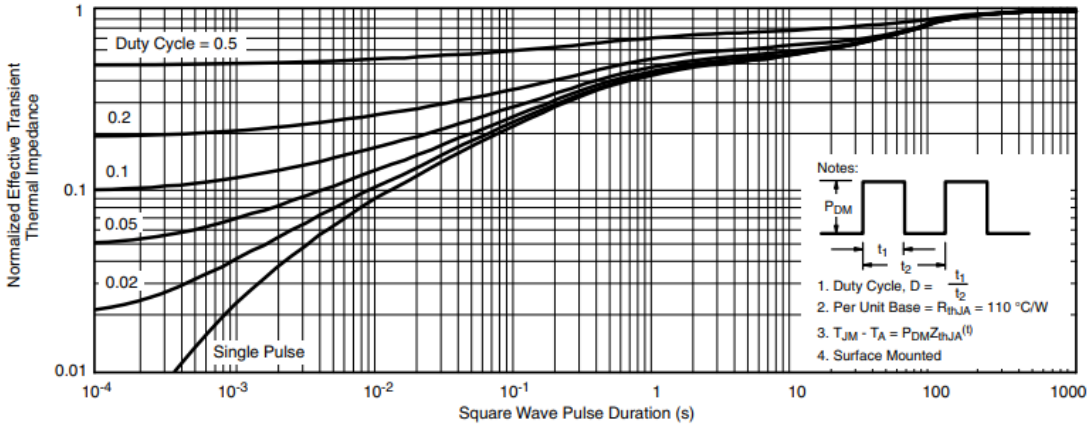
On-Resistance vs. Gate-to-Source Voltage



On-Resistance vs. Junction Temperature

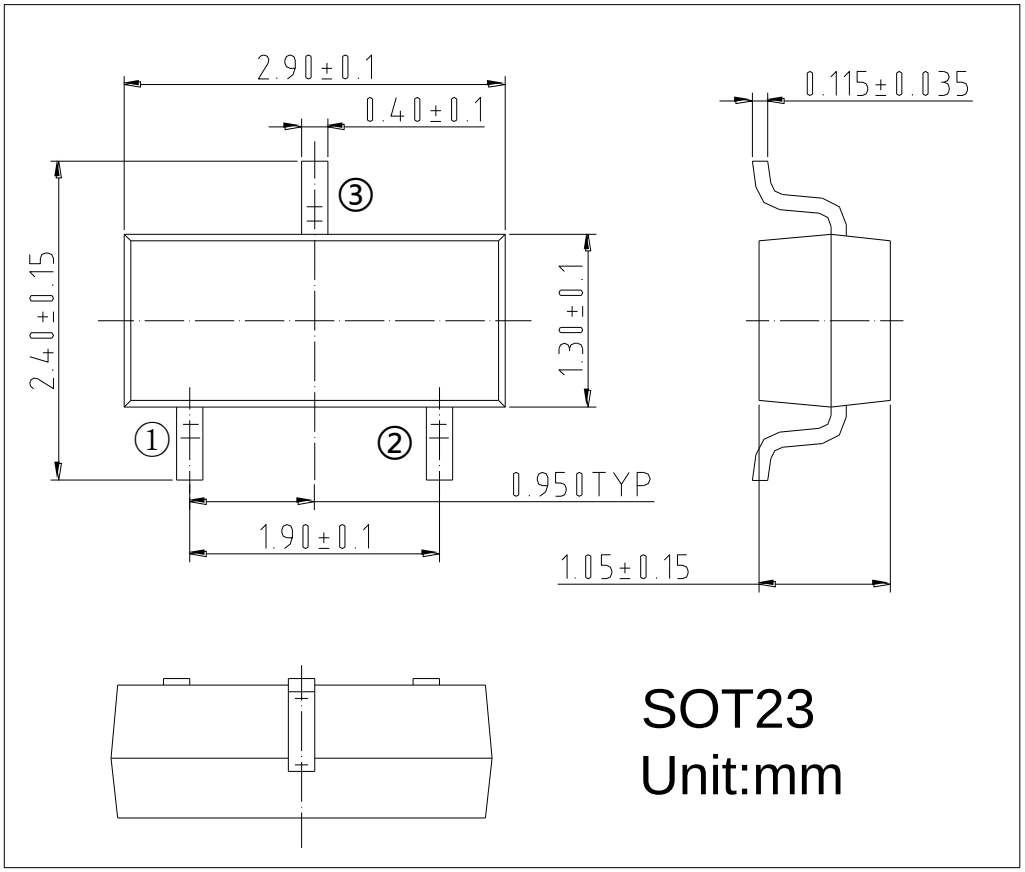


Safe Operating Area, Junction-to-Ambient

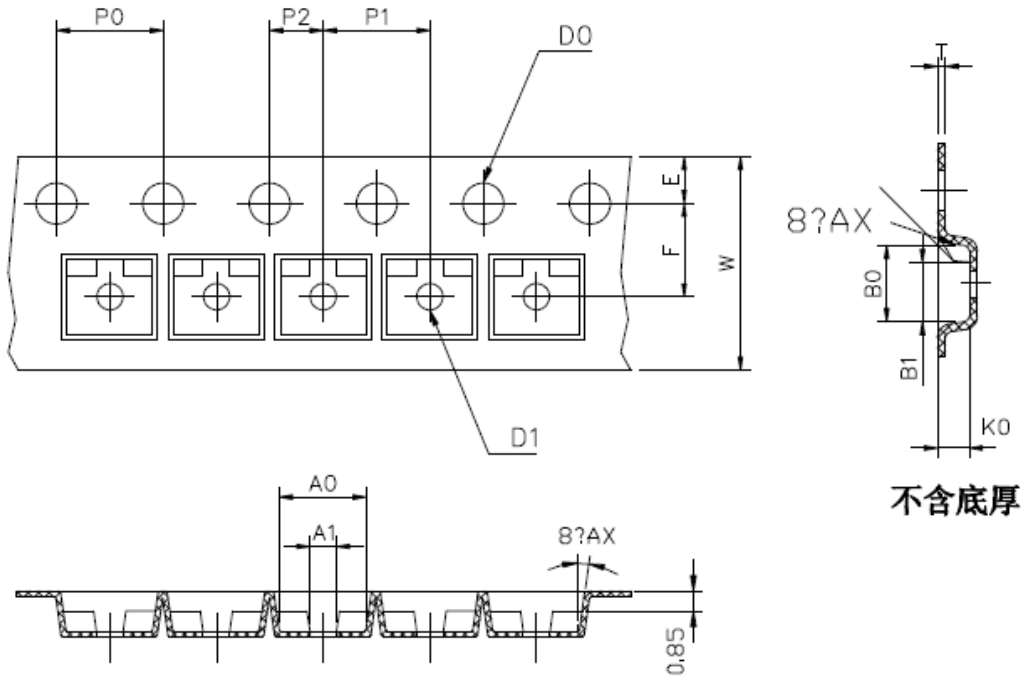


Normalized Thermal Transient Impedance, Junction-to-Ambient

➢ Package Information



TAPE AND REEL DATA



Symbol	A0	A1	B0	B1	K0	D_0	D_1	P_0	P_1
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	4.00±0.10
Symbol	W	E	F	P_2	t	t1	10*P0	4-P0	
Spec	7.95±0.05	1.70±0.05	3.50±0.10	2.00±0.10	0.21±0.02	0.05以上	40.00±0.10	4.00±0.10	

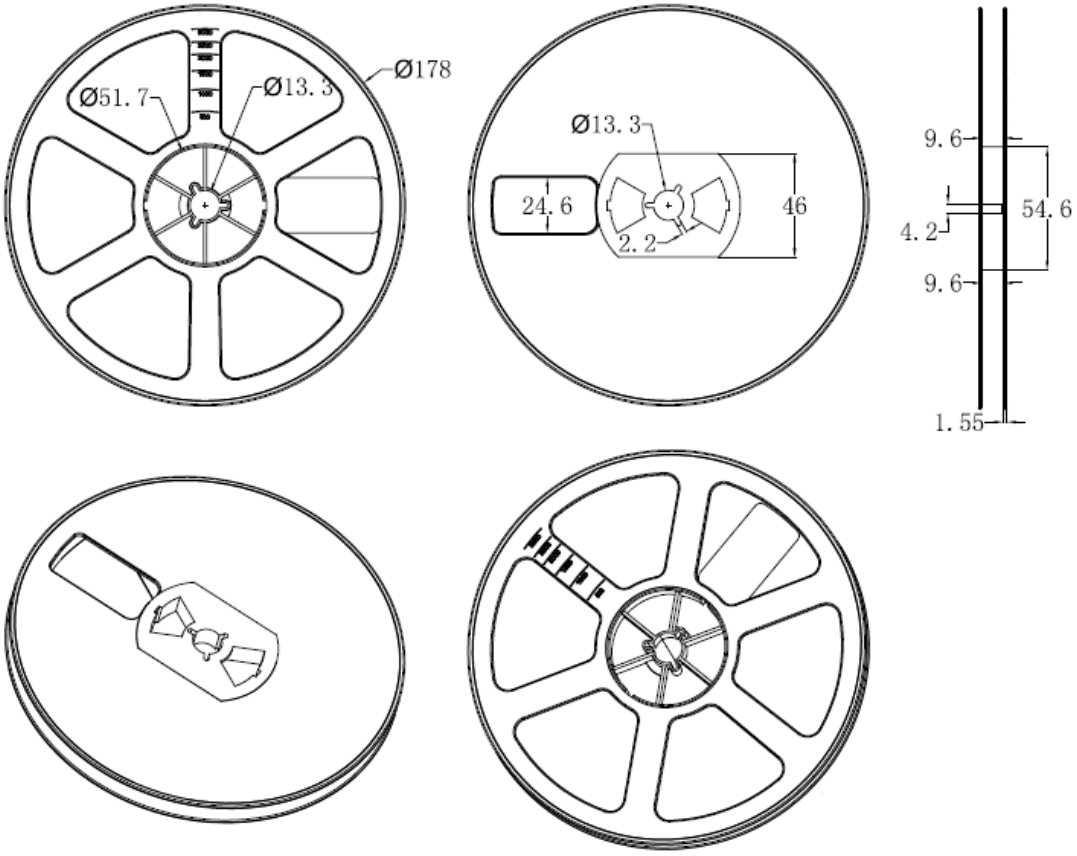
NOTE:

1.材料：PC+PS导电

2:10个链孔的累积公差不能超过0.2MM;

3.250MM带子的扁形不得超过1MM;

4.按照EIA-481-D的要求。



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