



SSC8033GS6

P-Channel Enhancement Mode MOSFET

➤ Features

VDS	VGS	RDSON Typ.	ID
-30V	±20V	47mR@-10V	-4A
		64mR@-4V5	

➤ Description

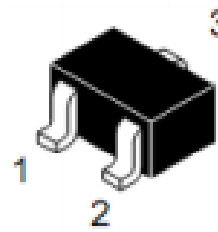
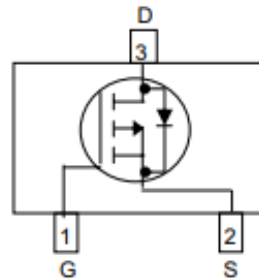
This device is produced with high cell density DMOS trench technology, which is especially used to minimize on-state resistance. This device particularly suits low voltage applications such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation are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

➤ Applications

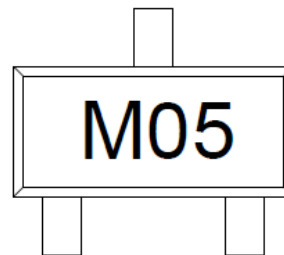
- TFT panel power switch
- Portable DVD, DPF
- High side DCDC converter
- High side driver for brushless DC motor

➤ Pin configuration

Top view



SOT23



M05 : Device Code

Marking

➤ Ordering Information

Device	Package	Shipping
SSC8033GS6	SOT23	3000/Reel



➤ **Absolute Maximum Ratings**($T_A=25^{\circ}\text{C}$ 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	A
I_{DM}	Pulsed Drain Current ^b	-14	A
P_D	Power Dissipation ^c	1.3	W
P_{DSM}	Power Dissipation ^a	0.74	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 ^a		175	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		100	

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 current rating 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.

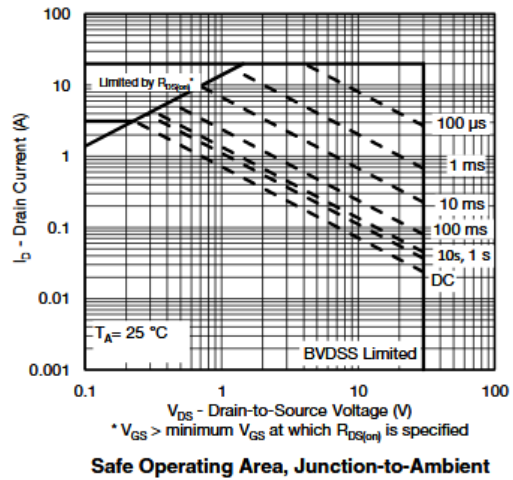
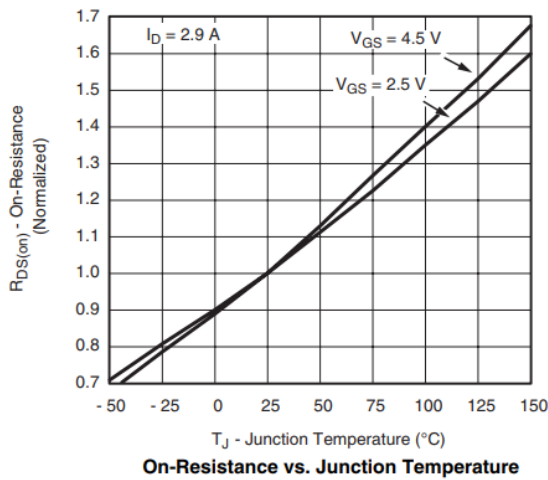
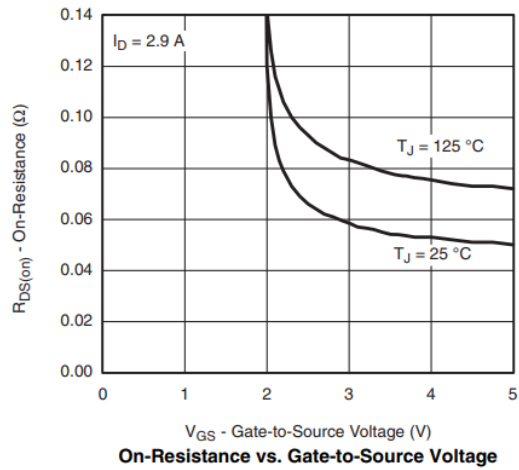
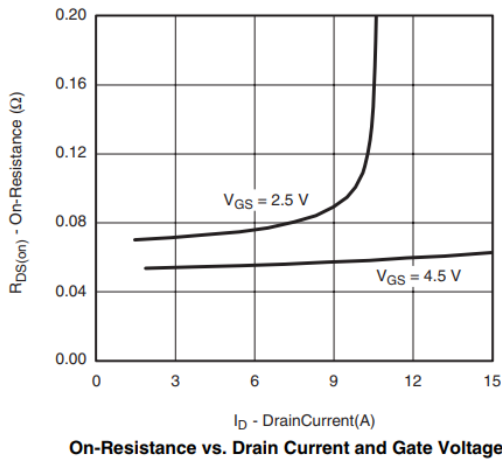
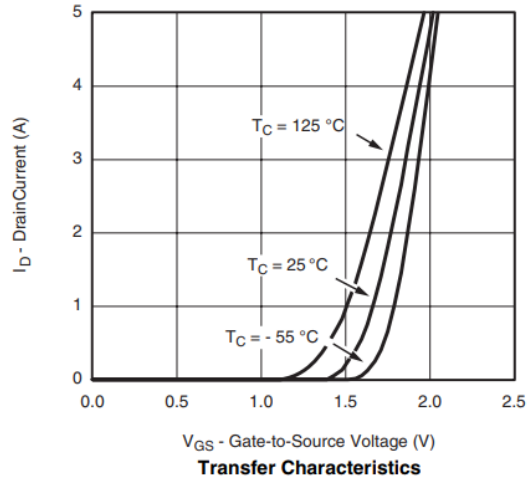
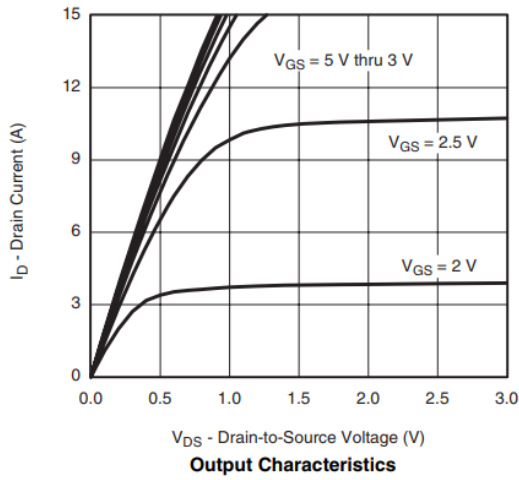


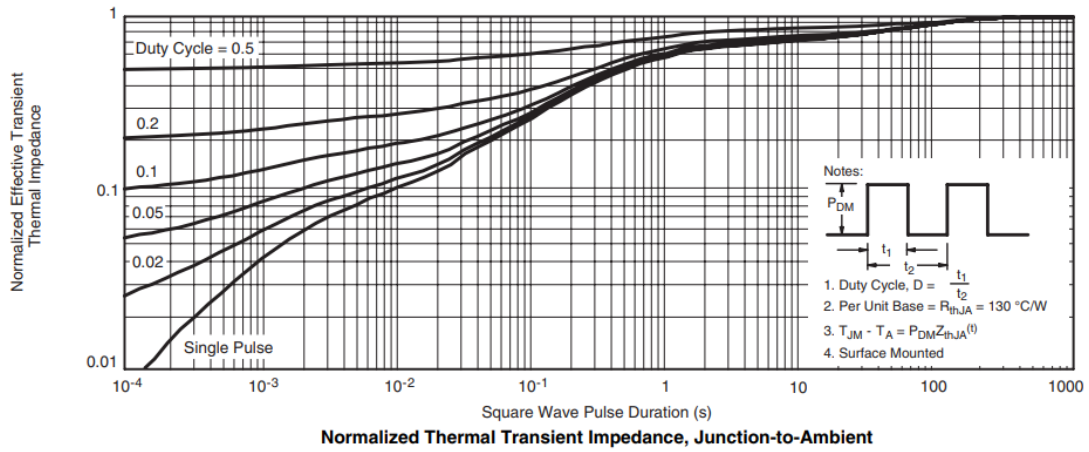
➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_{D}=-250\mu A$	-30			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_{D}=-250\mu A$	-1	-1.6	-2	V
$R_{DS(on)}$	Drain-Source On- Resistance	$V_{GS}=-10V, I_{D}=-3A$		47	70	mR
		$V_{GS}=-4.5V, I_{D}=-2A$		64	90	
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=-30V, V_{GS}=0V$			-1	μA
I_{GSS}	Gate-Source leak current	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
G_{FS}	Transconductance	$V_{DS}=-5V, I_{D}=-2.8A$		6		S
V_{SD}	Forward Voltage	$V_{GS}=0V, I_{S}=-1A$	-0.6	-0.8	-1.3	V
C_{iss}	Input Capacitance	$V_{DS}=-15V, V_{GS}=0V,$ $f=1MHz$		680		pF
C_{oss}	Output Capacitance			72		
C_{rss}	Reverse Transfer Capacitance			58		
$T_{D(ON)}$	Turn-on delay time			20		
T_r	Rise time	$V_{GS}=-6V,$ $V_{GEN}=-4.5V, R_L=6R,$ $R_G=6R, I_{D}=-1.0A$		13		ns
$T_{D(OFF)}$	Turn-off delay time			65		
T_f	Fall time			22		



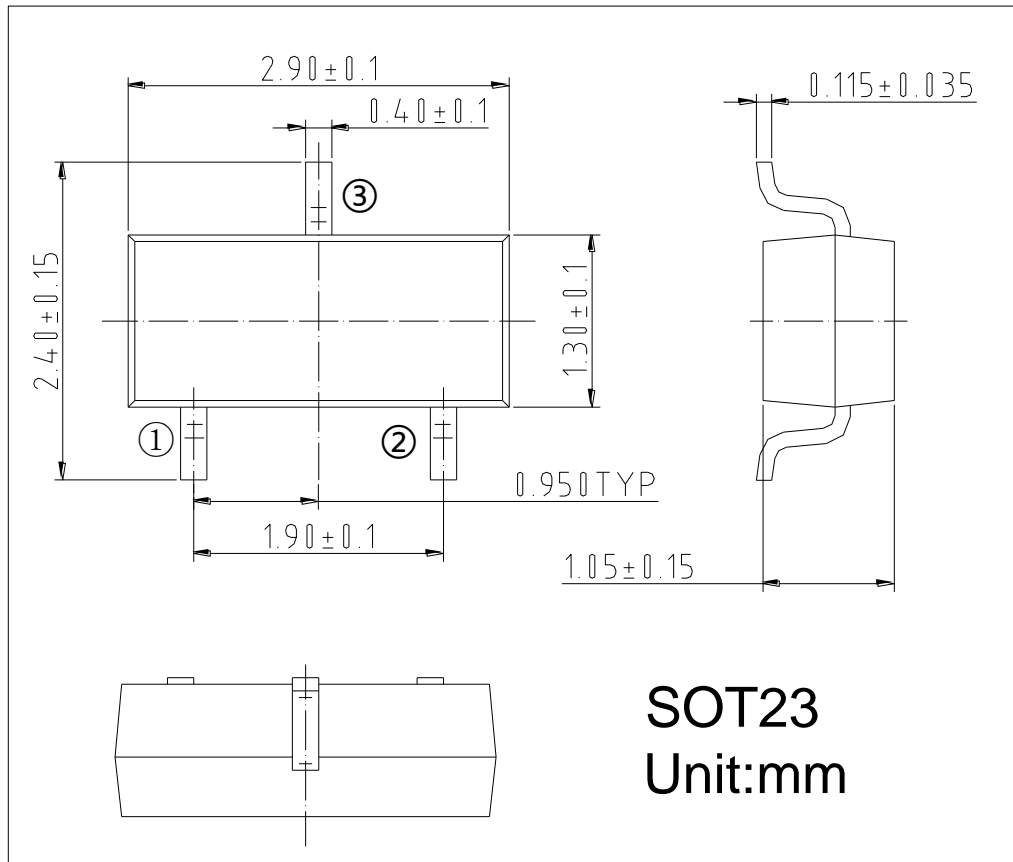
➤ **Typical Characteristics**($T_A=25^\circ\text{C}$ unless otherwise noted)





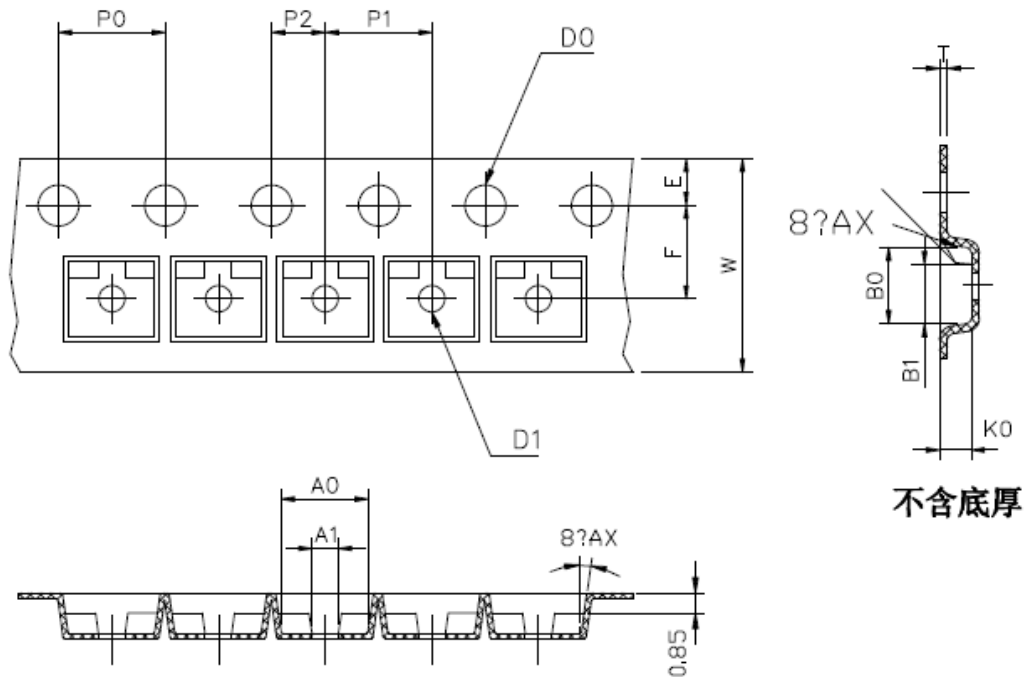


➤ Package Information



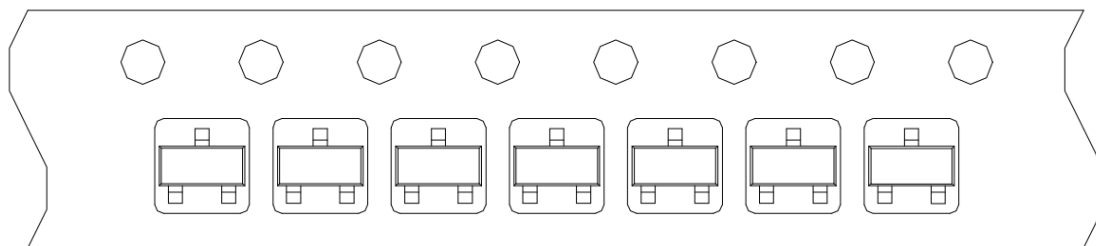
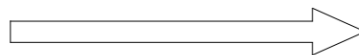


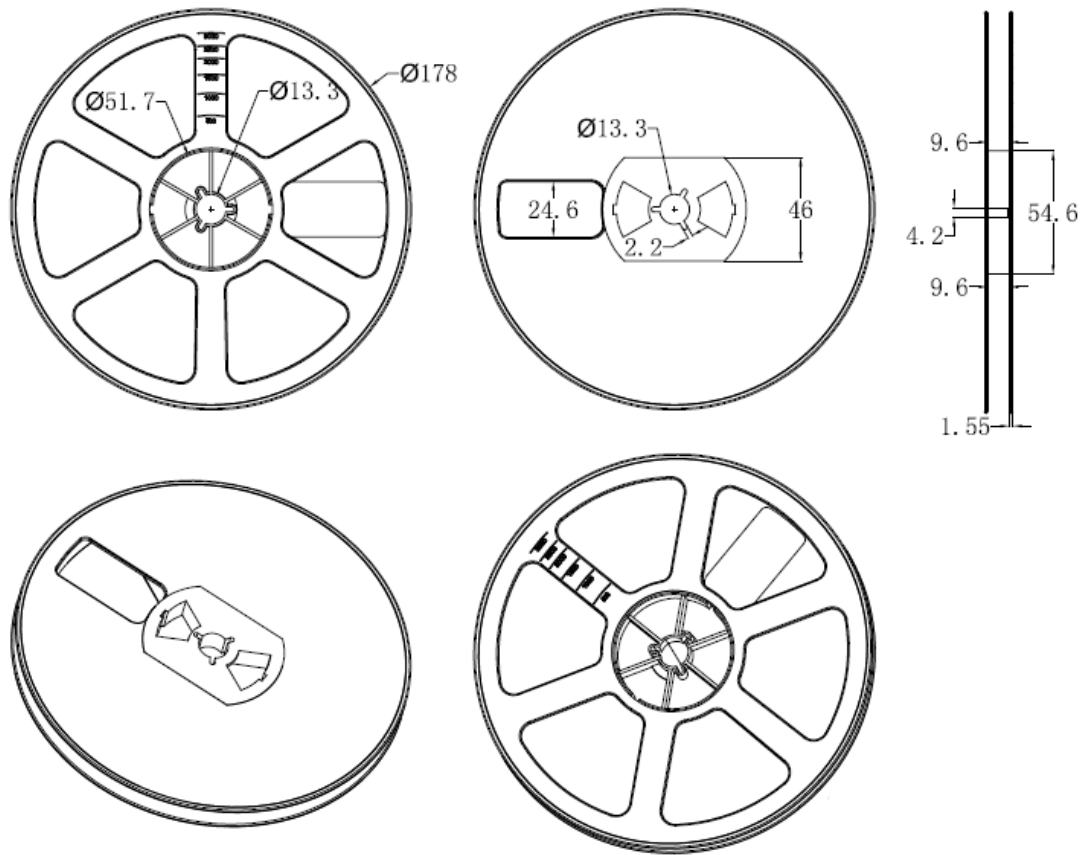
TAPE AND REEL DATA



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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带子的扇形不得超过1MM;
- 4.按照EIA-481-D的要求。



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