



SSC8239GT6

P-Channel Enhancement Mode MOSFET

➤ Features

V _{DS}	V _{GS}	R _{DS(ON)}	I _D
-30V	±20V	6.5mΩ@-10V	-84A
		8.9mΩ@-4V5	

➤ Description

This SSC8239GT6 uses advanced trench technology to provide excellent R_{DS(ON)} 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.

100% UIS + ΔV_{DS} + R_g Tested!

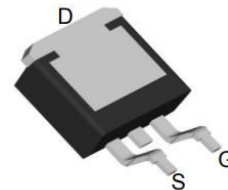
➤ Applications

- Load Switch
- NB Battery
- DCDC Conversion

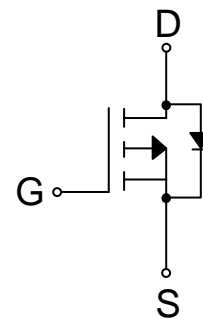
➤ Ordering Information

Device	Package	Shipping
SSC8239GT6	TO-263-3L	1000/Box

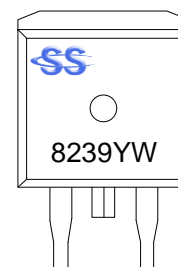
➤ Pin configuration



TO-263-3L (Bottom View)



Pin Configuration



Marking

(YW: Internal Traceability Code)



➤ 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 ^d	$T_C=25^{\circ}\text{C}$	-84
		$T_C=100^{\circ}\text{C}$	-47
I_{DSM}	Continuous Drain Current ^a	$T_A=25^{\circ}\text{C}$	-17
		$T_A=70^{\circ}\text{C}$	-12
I_{DM}	Pulsed Drain Current ^b	-336	A
P_D	Power Dissipation ^c	$T_C=25^{\circ}\text{C}$	74
		$T_C=100^{\circ}\text{C}$	29
P_{DSM}	Power Dissipation ^a	$T_A=25^{\circ}\text{C}$	2.9
		$T_A=70^{\circ}\text{C}$	1.9
I_{AS}	Avalanche Current ^b $L=0.5\text{mH}$ Single Pulse	-30	A
E_{AS}	Avalanche Energy ^b $L=0.5\text{mH}$ Single Pulse	225	mJ
T_J	Operation junction temperature	-55~150	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55~150	

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

Symbol	Parameter	Ratings	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance ^a	43	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Junction-to-Case Thermal Resistance	1.7	

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 power dissipation 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 $T_{J(\text{MAX})}=150^{\circ}\text{C}$, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heat sinking is used.
- The maximum current rating is package limited.

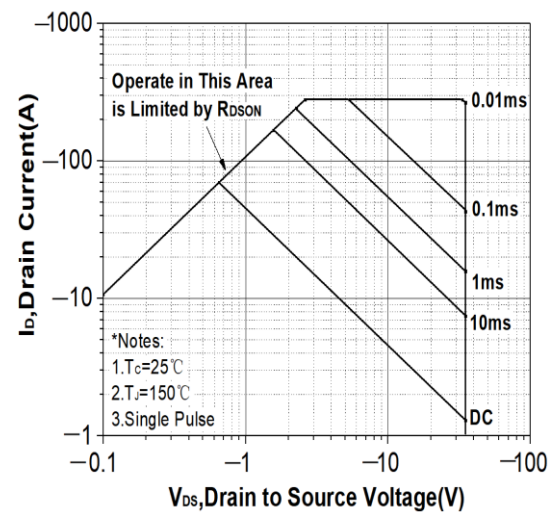
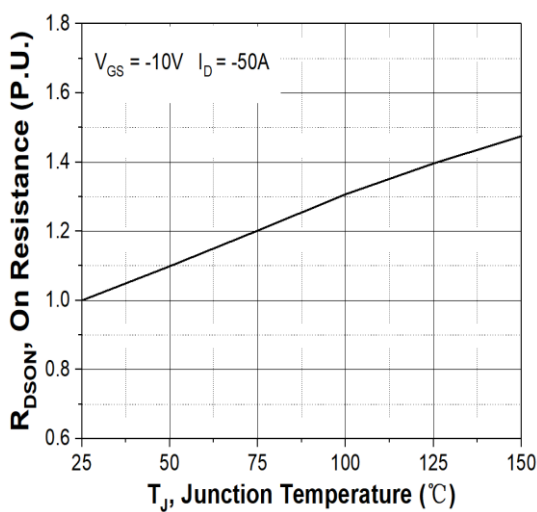
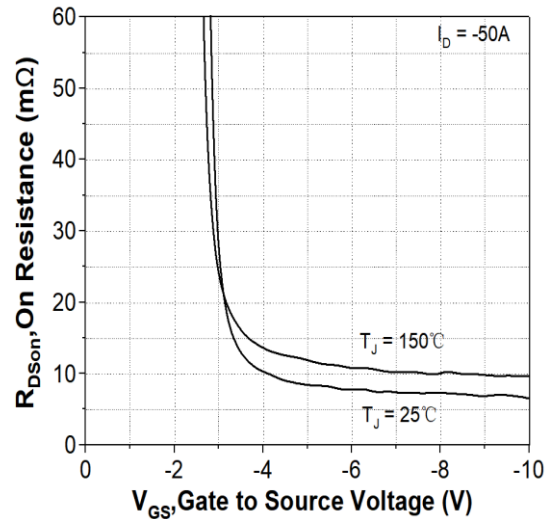
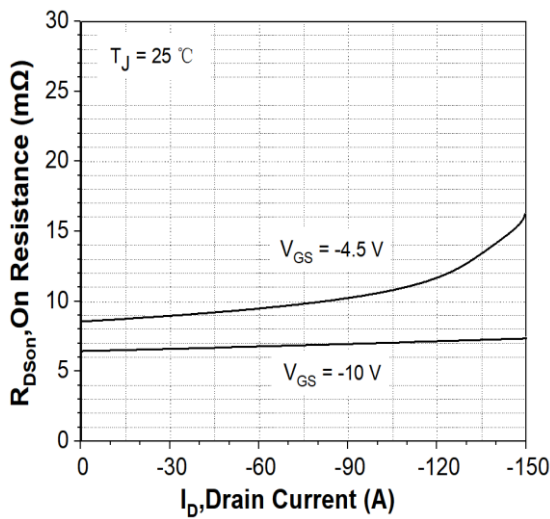
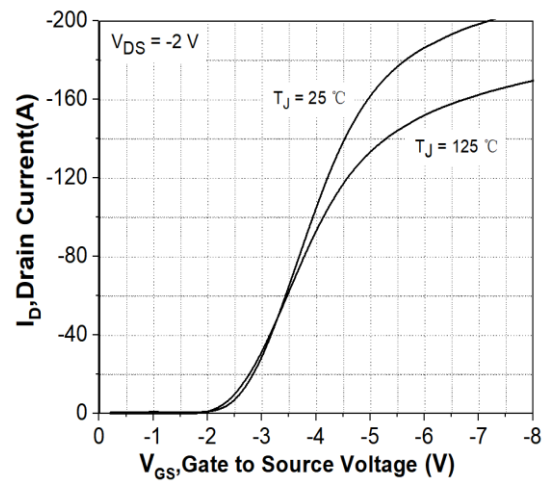
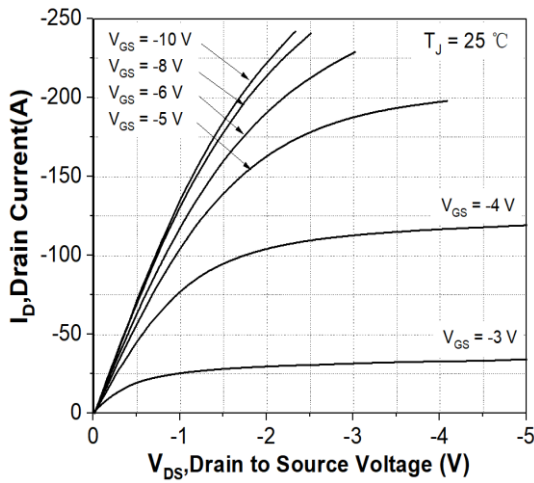


➤ **Electrical Characteristics (T_A=25°C unless otherwise noted)**

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-30			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250uA	-1	-1.5	-2.5	V
Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = -10V, I _D = -20A		6.5	8.5	mΩ
		V _{GS} = -4.5V, I _D = -10A		8.9	12	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -24V, V _{GS} = 0V			1	μA
Gate-Source Leak Current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Transconductance	G _{FS}	V _{DS} = -5V, I _D = -10A		35		s
Forward Voltage	V _{SD}	V _{GS} = 0V, I _S = -5A		-0.8	-1.3	V
Gate Resistance	R _G	V _{DS} = 0V, f = 1MHz		2.3		Ω
Input Capacitance	C _{ISS}	V _{DS} = -15V, V _{GS} = 0V, f = 1MHz		4900		pF
Output Capacitance	C _{OSS}			520		
Reverse Transfer Capacitance	C _{RSS}			400		
Total Gate Charge	Q _G	V _{GS} = -10V, V _{DS} = -15V, I _D = -20A		82		nC
Gate to Source Charge	Q _{GS}			11		
Gate to Drain Charge	Q _{GD}			20		
Turn-on Delay Time	T _{D(ON)}	V _{GS} = -10V, V _{DS} = -15V, R _L = 0.75Ω, R _G = 3Ω		16		ns
Rise Time	T _r			52		
Turn-off Delay Time	T _{D(OFF)}			107		
Fall Time	T _f			26		
Diode Recovery Time	T _{rr}	I _F = -20A, di/dt = 500A/us		26		ns
Diode Recovery Charge	Q _{rr}	I _F = -20A, di/dt = 500A/us		18		nC

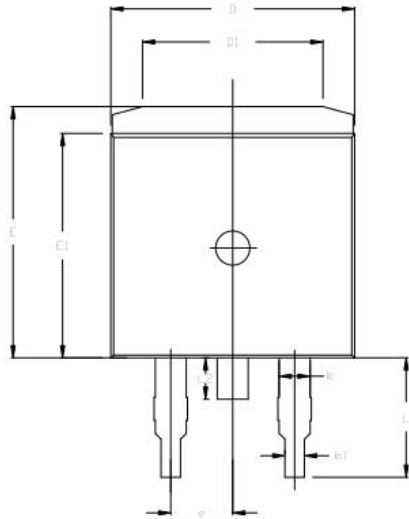


➤ Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

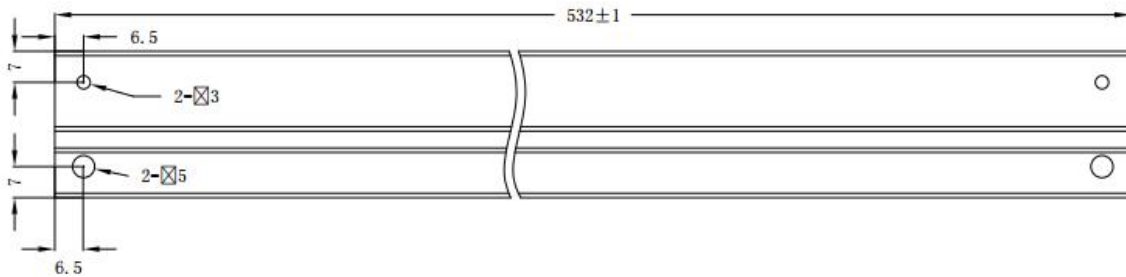




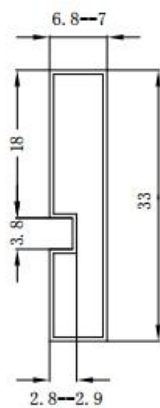
Package Information



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	4.40	--	4.60
b	1.20	--	1.36
b1	0.70	--	0.90
C	0.48	--	0.53
C1	1.28	--	1.32
C2	0.04	0.12	0.20
D	9.80	10.00	10.20
D1	7.25	7.40	7.55
E	10.20	10.30	10.40
E1	9.10	9.20	9.30
e	--	2.54	--
L	4.70	4.90	5.10
L1	2.40	2.60	2.80
L2	1.50	1.70	1.90



T=0.5 ±0.1



技术要求:

1. 材料: 透明PVC
2. 表面电阻: $10E5 \sim 10E10$ OHMS/SQ
3. 未注尺寸公差 ± 0.3
4. 黑色钉子由厂家出货时塞于左端



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