

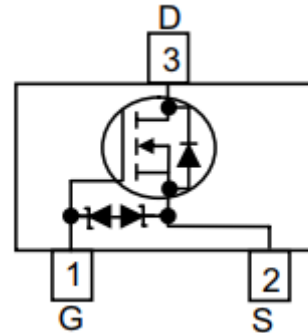
SSC8164GS6
N-Channel Small Switching MOSFET with ESD Protection

 ➤ **Features**

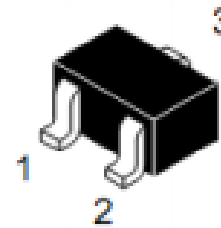
VDS	VGS	RDSON Typ.	ID	ESD
60V	±20V	1.1R@10V	0.4A	500V
		1.5R@4V5		

 ➤ **Pin configuration**

Top view


 ➤ **Description**

This device is an N-Channel enhancement mode MOSFET which is produced with high cell density and DMOS trench technology. This device particularly suits low voltage applications, especially for battery powered circuits, the tiny and thin outline saves PCB consumption.



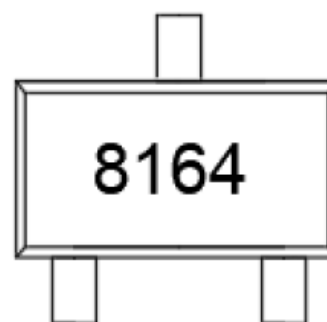
SOT23

 ➤ **Applications**

- Load Switch
- Portable Devices
- DCDC Convension

 ➤ **Ordering Information**

Device	Package	Shipping
SSC8164GS6	SOT23	3000/Reel



Marking

➤ **Absolute Maximum Ratings**($T_A=25^{\circ}\text{C}$ 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	0.4	A
I_{DM}	Pulsed Drain Current	0.8	A
P_D	Power Dissipation	0.45	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		277	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		166	

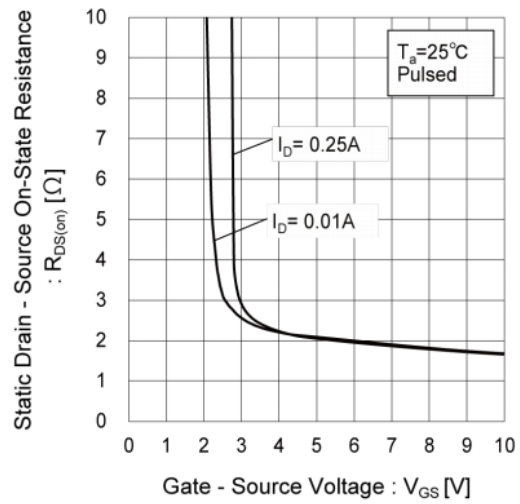
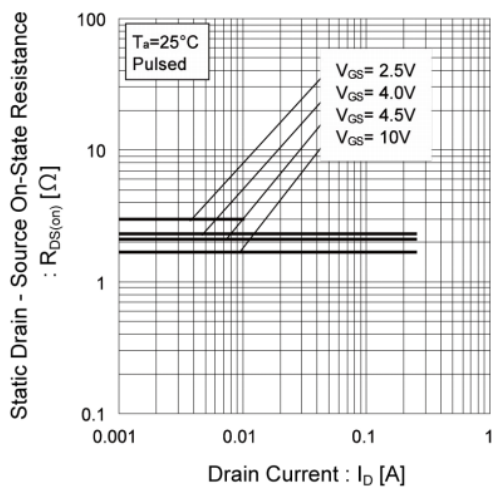
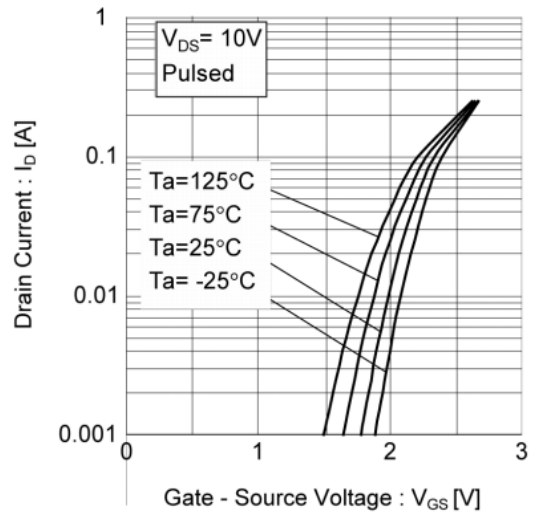
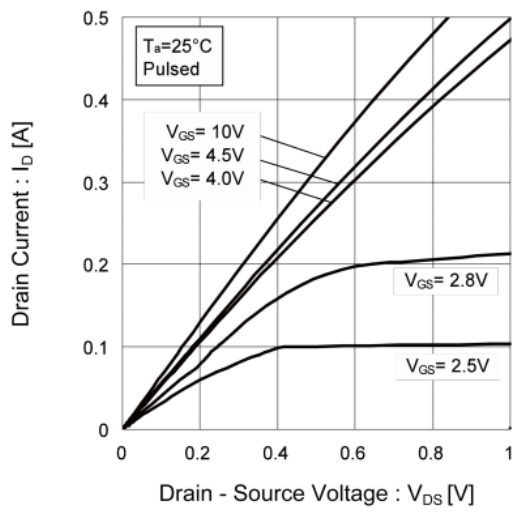
➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

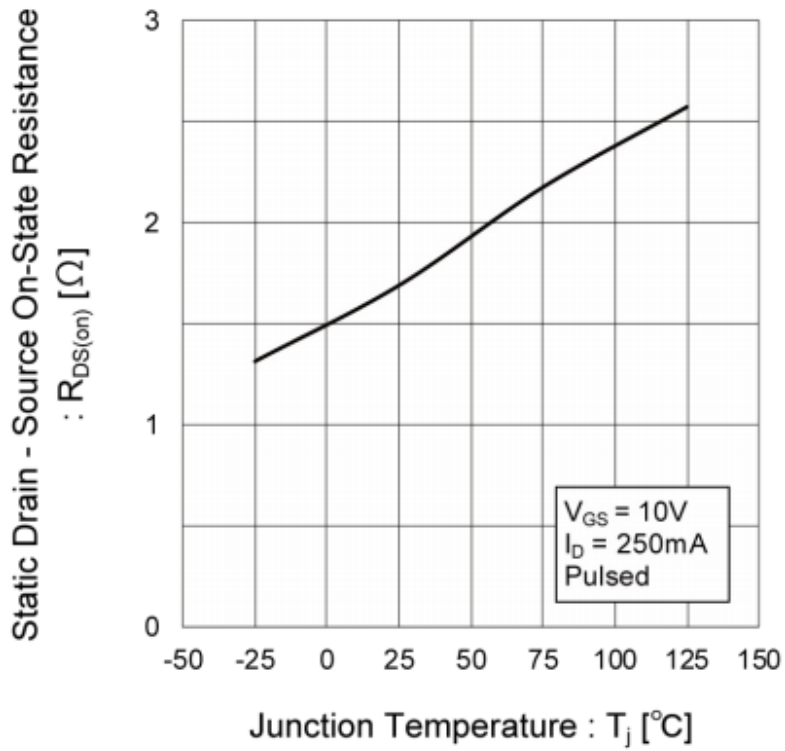
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0\text{V}, I_D=10\mu\text{A}$	60			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.75	1	1.25	V
$R_{DS(on)}$	Drain-Source On- Resistance	$V_{GS}=10\text{V}, I_D=0.5\text{A}$		1.1	2.5	R
		$V_{GS}=4.5\text{V}, I_D=0.5\text{A}$		1.5	3.5	
		$V_{GS}=2.5\text{V}, I_D=0.5\text{A}$		1.7	4	

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=60V, V_{GS}=0V$			1	μA
I_{GSS}	Gate-Source leak current	$V_{GS}=\pm 15V, V_{DS}=0V$			± 10	μA
G_{FS}	Forward Transconductance	$V_{DS}=10V, I_D=0.2A$	80			ms
V_{SD}	Forward Voltage	$V_{GS}=0V, I_S=0.2A$	1.25		1.3	V

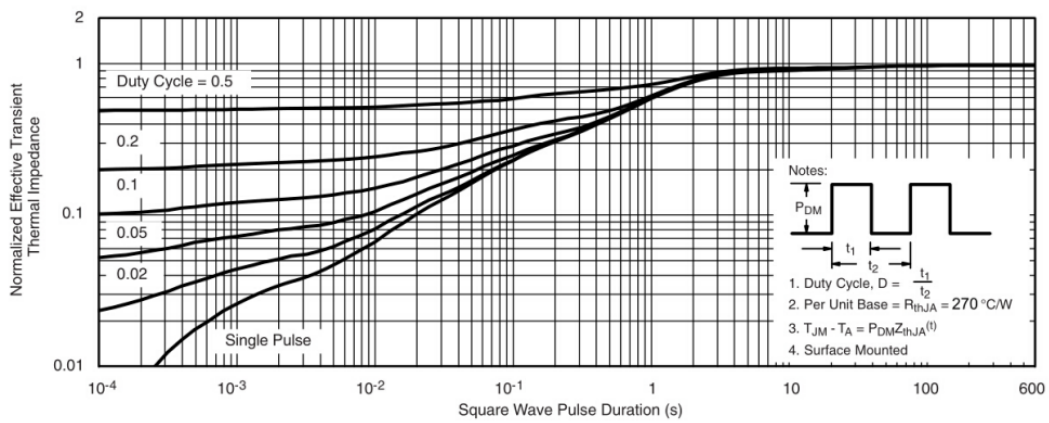
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
C_{iss}	Input Capacitance	$V_{DS}=25V, V_{GS}=0V,$ $F=1MHz$		30		pF
C_{oss}	Output Capacitance			12		
C_{rss}	Reverse Transfer Capacitance			9		
$T_{D(ON)}$	Turn-on delay time	$V_{GS}=5V,$ $V_{DS}=5V,$ $R_G=10R, R_L=500R, I_D=10mA$			12	ns
$T_{D(OFF)}$	Turn-off delay time				35	

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

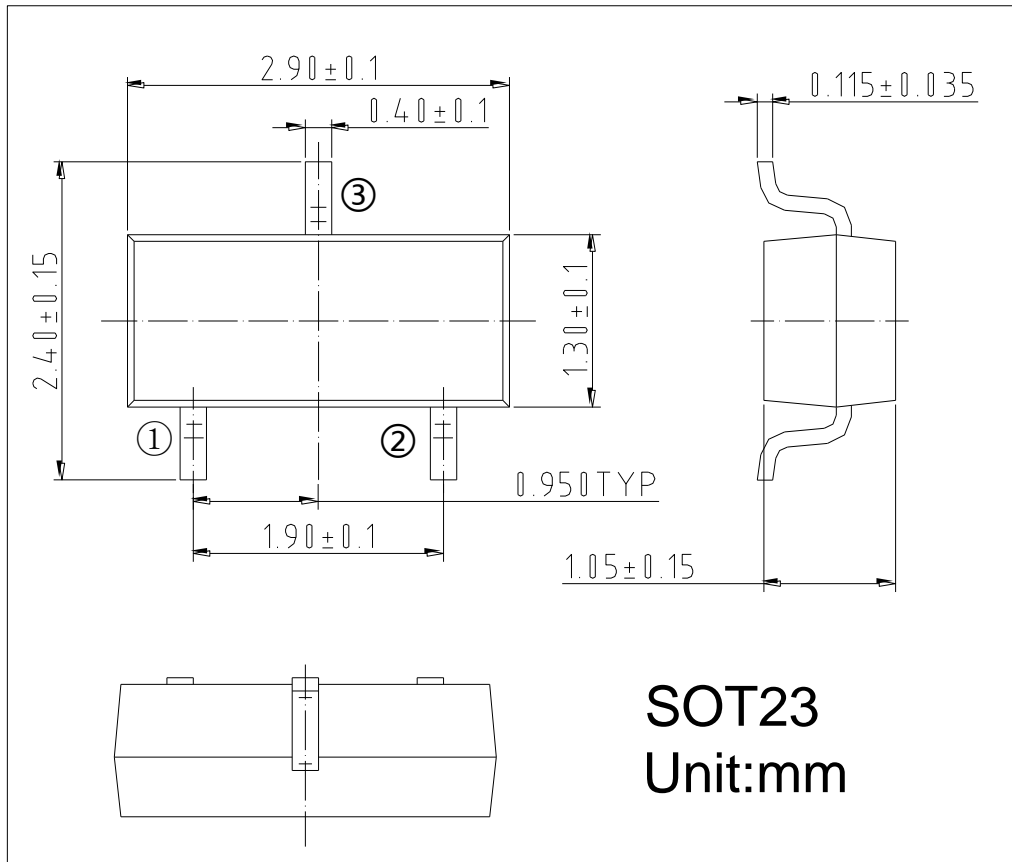




On-Resistance vs. Junction Temperature



➤ **Package Information**



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