SSC8120GS6

N-Channel Enhancement Mode MOSFET

- **Features**

VDS	VGS	RDSon TYP	ID	ESD
20V	±12V	310mR@4V5 490mR@2V5 850mR@1V8	1.2A	1.2K

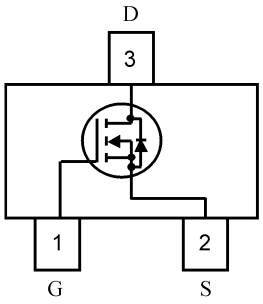
- **Applications**
  - Load Switch
  - Portable Devices
  - DCDC Conversion

- **General Description**

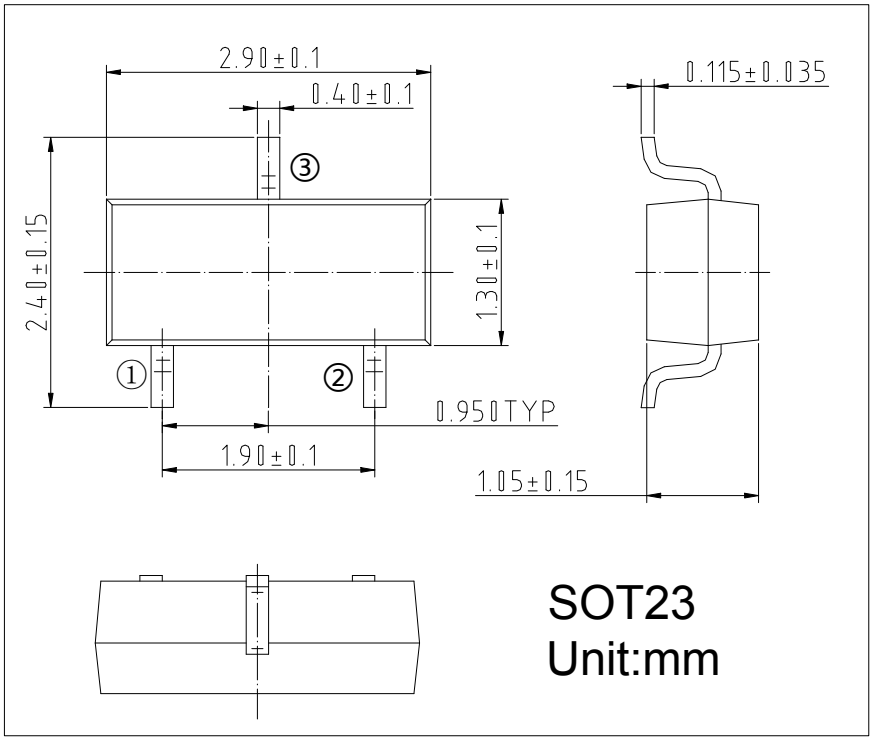
This device is a N-Channel enhancement mode MOSFET which is produced with high cell density and DMOS trench technology .This device particularly suits low voltage applications, especially for battery powered circuits, the tiny and thin outline saves PCB consumption.

- **Pin configuration**

Top View



- **Package Information**



- **Absolute Maximum Ratings** @ T_A = 25°C unless otherwise noted

Parameter		Symbol	Ratings	Unit
Drain-Source Voltage		V_{DSS}	20	V
Gate-Source Voltage		V_{GSS}	±12	V
Drain Current	Continuous	I_D	1.2	A
	Pulsed		3	
Power Dissipation(1)		P_D	250	mW
Operating and Storage Junction Temperature Range		T_J, T_{STG}	-55 to +150	°C

- **Electrical Characteristics** @ T_A = 25°C unless otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 250uA	20	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 16 V, V_{GS} = 0 V	--	--	1	uA
Gate–Body Leakage	I_{GSS}	V_{GS} = ±12 V, V_{DS} = 0 V	--	--	±10	uA
ON CHARACTERISTICS(2)						
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS} = V_{GS}, I_D = 50uA	0.35	0.6	1	V
Static Drain–Source On-Resistance	$R_{DS(ON)}$	V_{GS} = 4.5 V, I_D = 0.6 A	--	310	450	mR
		V_{GS} = 2.5 V, I_D = 0.5 A	--	490	765	
		V_{GS} = 1.8 V, I_D = 0.35 A	--	850	1300	
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{ISS}	V_{DS} = 10 V, V_{GS} = 0 V, f = 1.0 MHz	--	110	--	pF
Output Capacitance	C_{OSS}		--	15	--	
Reverse Transfer Capacitance	C_{RSS}		--	12	--	
SWITCHING CHARACTERISTICS						
Turn–On Delay Time	$T_{D(ON)}$	V_{DD} = 5 V, I_D = 0.3A, V_{GS} =4.5 V,R_{GEN}=6Ω	--	--	5	nS
Turn–On Rise Time	T_R		--	--	80	
Turn–Off Delay Tim	$T_{D(OFF)}$		--	--	26	
Turn–Off Fall Time	T_F		--	--	25	
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Diode Forward Voltage(2)	V_{SD}	V_{GS} = 0 V, I_S = 0.11 A	--	0.7	1.3	V

Notes :

1. Surface Mounted on FR4 Board, t < 10 sec.
   Pulse Test: Pulse Width < 300μs, Duty Cycle < 2%

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