

N-Channel Enhancement Mode MOSFET

- **Features**

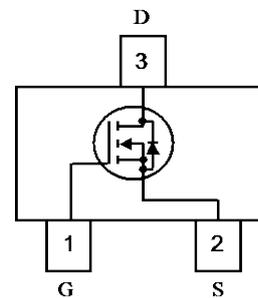
VDS	VGS	RDSon TYP	ID
60V	±20V	45mR@10V 80mR@4V5	3A

- **Applications**

- Load Switch
- Portable Devices
- DCDC Conversion

- **Pin Configuration**

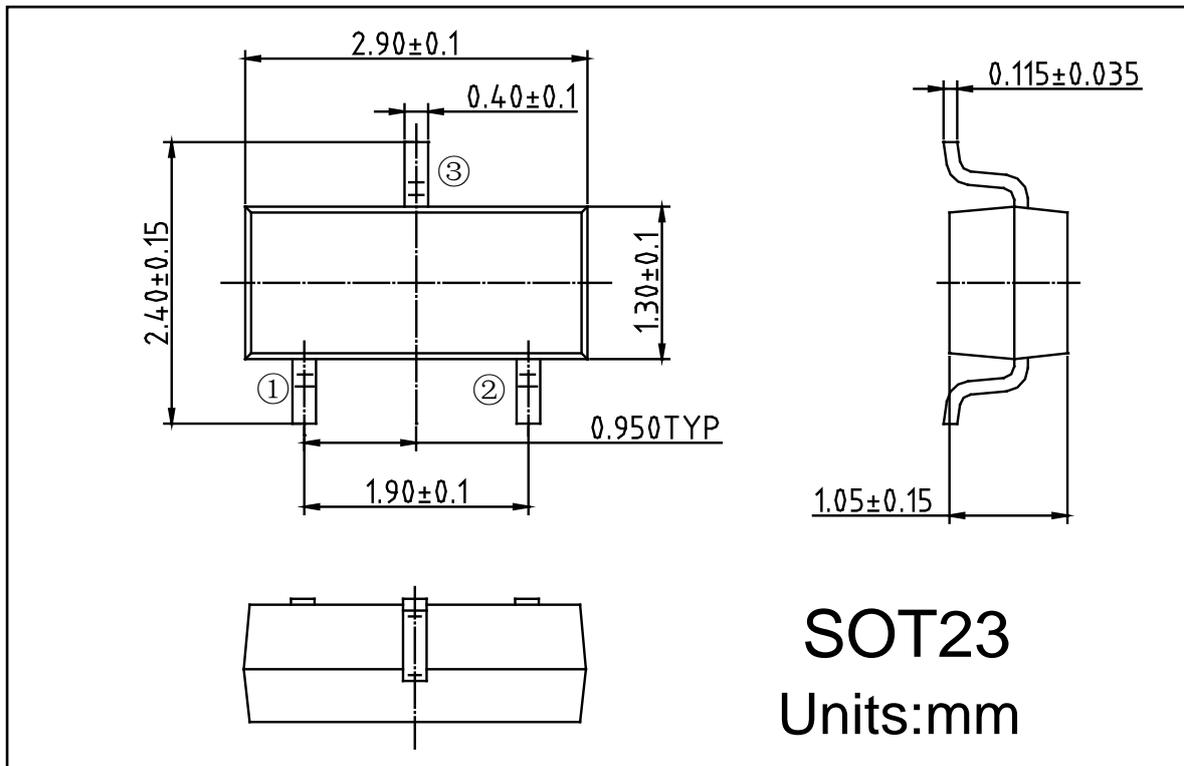
Top View



- **General 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. Excellent thermal and electrical capabilities.

- **Package Information**





SSC8066GS6

● **Absolute Maximum Ratings** @ $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	I_D	Continuous	3
		Pulsed	12
Power Dissipation ⁽¹⁾	P_D	600	mW
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

● **Electrical Characteristics** @ $T_A = 25^\circ\text{C}$ unless otherwise noted

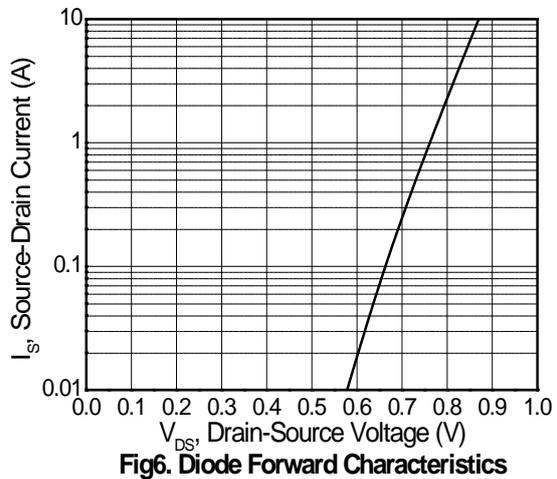
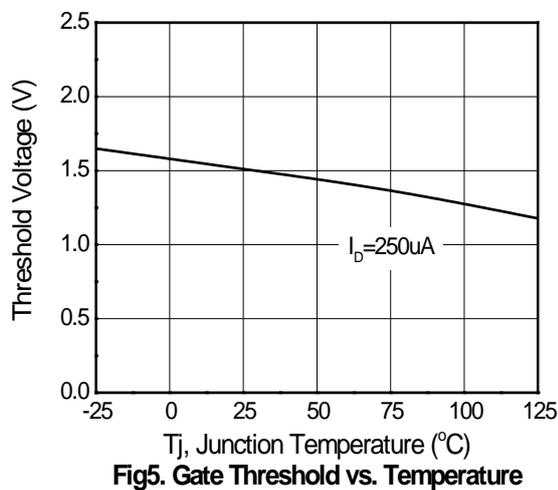
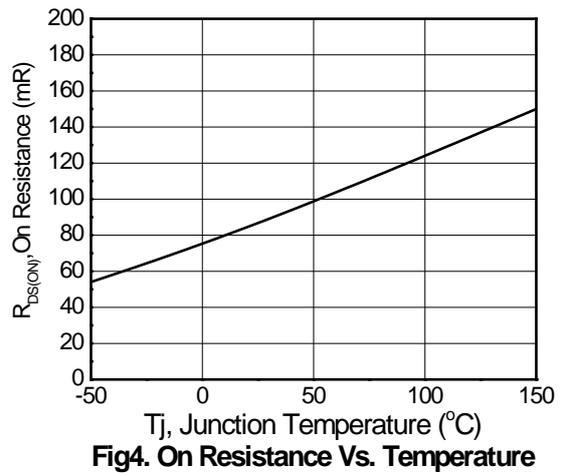
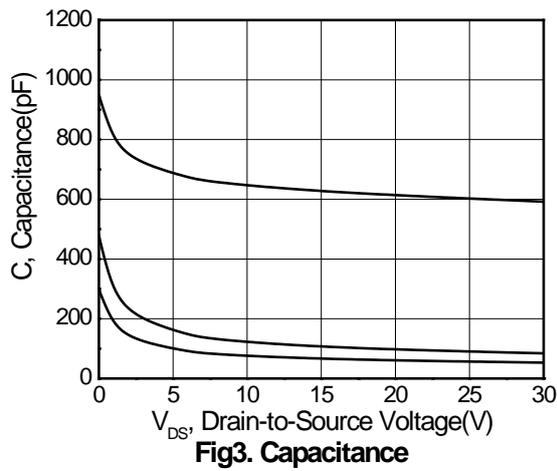
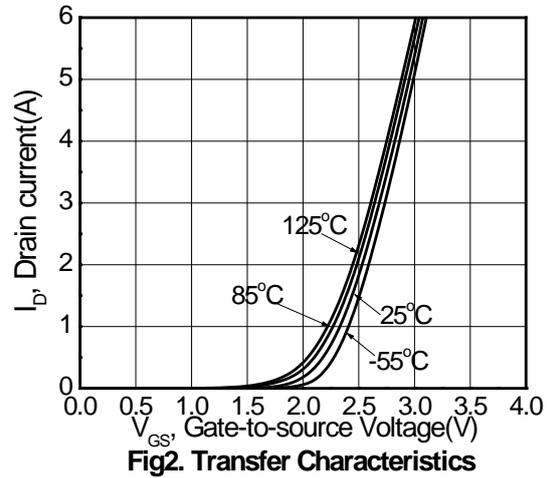
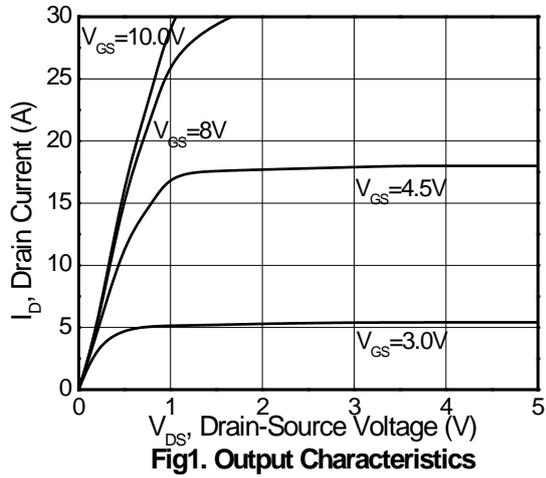
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 250\mu\text{A}$	60	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 48\text{ V}, V_{GS} = 0\text{ V}$	--	--	1	μA
Gate-Body Leakage	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$	--	--	± 100	nA
ON CHARACTERISTICS⁽²⁾						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	1	1.5	3	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 3\text{ A}$	--	45	72	mR
		$V_{GS} = 4.5\text{ V}, I_D = 2.4\text{ A}$	--	80	95	
Forward Transconductance	G_{FS}	$V_{DS} = 5\text{ V}, I_D = 2.4\text{ A}$	2	5	14	S
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{ISS}	$V_{DS} = 25\text{ V}, V_{GS} = 0\text{ V},$ $f = 1.0\text{ MHz}$	--	592	--	pF
Output Capacitance	C_{OSS}		--	84	--	
Reverse Transfer Capacitance	C_{RSS}		--	53	--	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	$T_{D(ON)}$	$V_{DD} = 5\text{ V}, I_D = 2.4\text{ A},$ $V_{GS} = 4.5\text{ V}, R_{GEN} = 6\Omega$	--	--	15	nS
Turn-On Rise Time	T_R		--	--	80	
Turn-Off Delay Time	$T_{D(OFF)}$		--	--	60	
Turn-Off Fall Time	T_F		--	--	25	
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Diode Forward Voltage ⁽²⁾	V_{SD}	$V_{GS} = 0\text{ V}, I_S = 1.1\text{ A}$	0.6	0.8	1.15	V

Notes :

1. Surface Mounted on FR4 Board, $t < 10\text{ sec.}$
Pulse Test: Pulse Width $< 300\mu\text{s}$, Duty Cycle $< 2\%$

2.

● **Typical Performance Characteristics**





SSC8066GS6

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