

N-Channel Enhancement Mode MOSFET

- **Features**

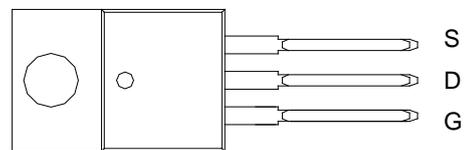
VDS	VGS	RDSon TYP	ID
30V	±20V	8.5mR@10V	75A
		10.5mR@4V5	

- **Applications**

- Load Switch
- PC/NB
- DCDC conversion

- **Pin configuration**

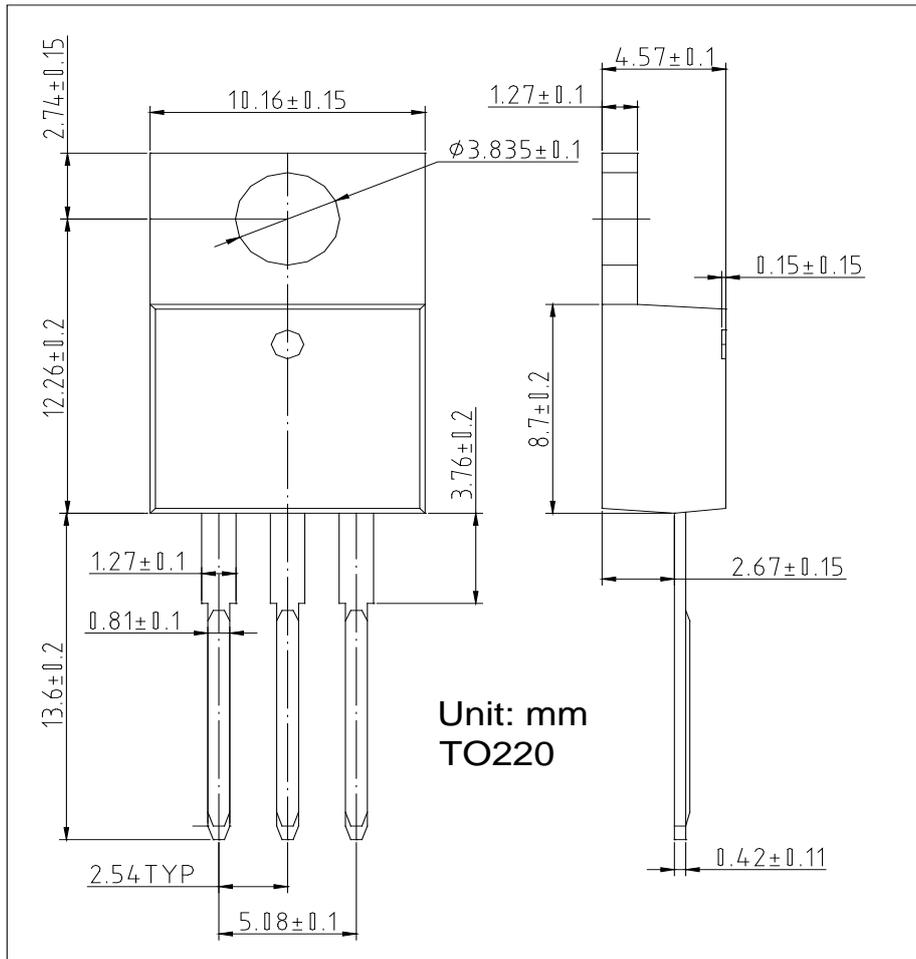
Top View



- **General Description**

This device uses advanced trench technology to provide excellent RDS(ON) and low gate charge. This device is suitable for use as a load switch or in PWM applications.

- **Package Information**





SSC8030GT4

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

Parameter	Symbol	N-channel	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current (Note 1)	I_D	75	A
Pulsed Drain Current (Note 2)	I_{DM}	200	A
Total Power Dissipation (Note 1)	P_D	70	W
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 specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 250\ \mu\text{A}$	30	--	--	V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\ \mu\text{A}$	1	--	3	V
Gate-Body Leakage Current	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$	--	--	± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 24\text{ V}, V_{GS} = 0\text{ V}$	--	--	1	μA
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 15\text{ A}$	--	8.5	10.5	mR
		$V_{GS} = 4.5\text{ V}, I_D = 12\text{ A}$	--	11	15	
Forward Transconductance	G_{FS}	$V_{DS} = 15\text{ V}, I_D = 12\text{ A}$	8	16	--	S
Diode Forward Voltage	V_{SD}	$V_{GS} = 0\text{ V}, I_S = 1\text{ A}$	--	0.8	1.5	V
Input Capacitance	C_{ISS}	$V_{DS} = 15\text{ V}, V_{GS} = 0\text{ V},$ $f = 1.0\text{ MHz}$	--	1200	--	pF
Output Capacitance	C_{OSS}		--	200	--	
Reverse Transfer Capacitance	C_{RSS}		--	105	--	
Turn-On Delay Time	$T_{D(ON)}$	$V_{DS} = 15\text{ V}, R_L = 2.3\text{R},$	--	--	18	ns
Turn-Off Delay Time	$T_{D(OFF)}$	$V_{GS} = 10\text{ V}, R_{GEN} = 3\text{R}$	--	--	70	

Note :

1. DUT is mounted on a 1 in^2 FR-4 board with 2oz. Copper in a still air environment at 25°C , the current rating is based on the DC (<10s) test conditions.
2. Repetitive rating, pulse width limited by junction temperature.

3. Typical Performance Characteristics

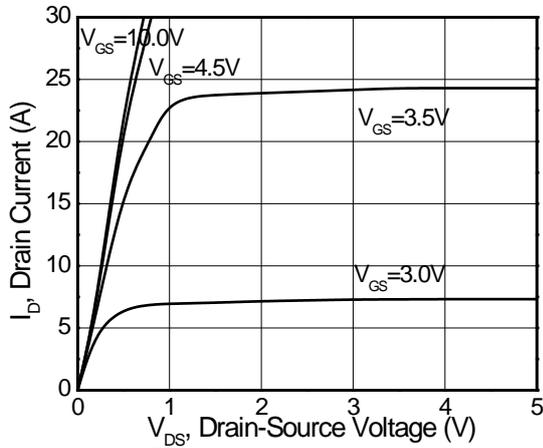


Fig1. Output Characteristics

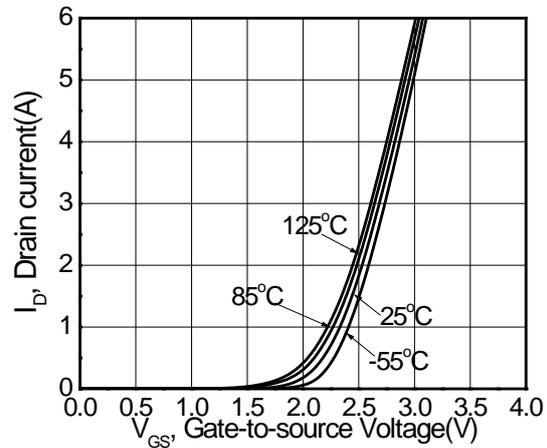


Fig2. Transfer Characteristics

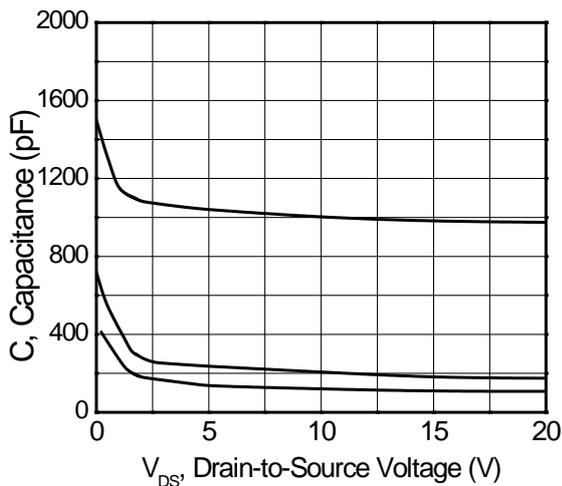


Fig3. Capacitance

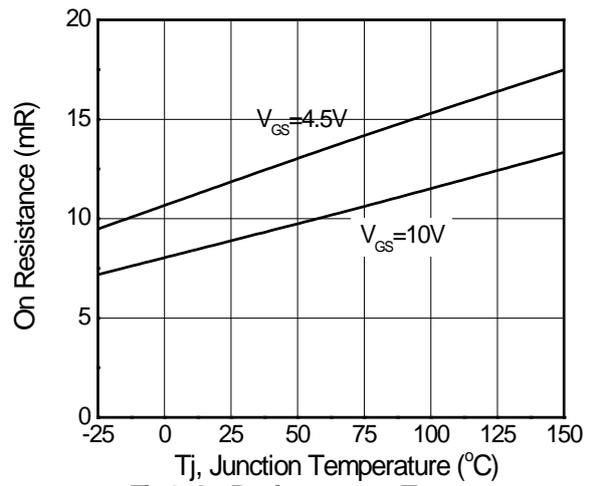


Fig4. On Resistance vs. Temperature

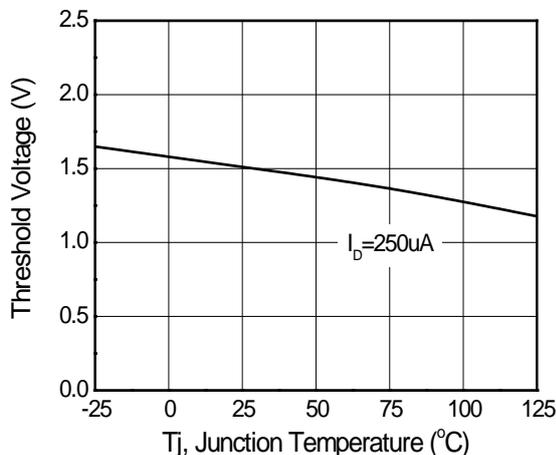


Fig5. Gate Threshold vs. Temperature

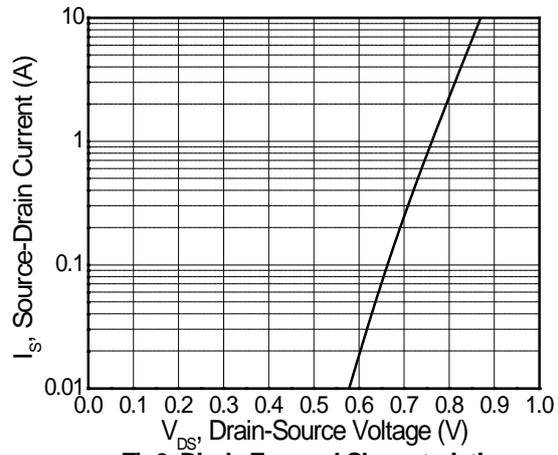


Fig6. Diode Forward Characteristics



SSC8030GT4

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