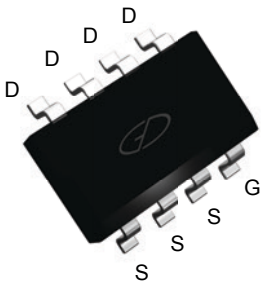
GOOD-ARK
SEMICONDUCTOR

SSFQ3983

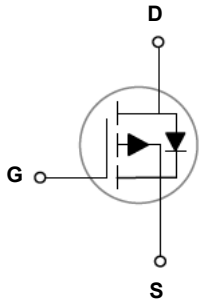
30V P-Channel MOSFET

Main Product Characteristics

$V_{(BR)DSS}$	-30V
$R_{DS(ON)}$	5.8mΩ
I_D	-18A



SOP-8



Schematic Diagram

Features and Benefits

- Advanced MOSFET process technology
- Ideal for high efficiency switched mode power supplies
- Low on-resistance with low gate charge
- Fast switching and reverse body recovery

RoHS Compliant

Description

The SSFQ3983 utilizes the latest techniques to achieve high cell density and low on-resistance. These features make this device extremely efficient and reliable for use in high efficiency switch mode power supply and a wide variety of other applications.

Absolute Maximum Ratings (T_C=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current – Continuous (T_A=25°C)	I_D	-18	A
Drain Current – Continuous (T_A=70°C)		-14.4	A
Drain Current – Pulsed[1]	I_{DM}	-72	A
Power Dissipation (T_A=25°C)	P_D	1.47	W
Power Dissipation – Derate above 25°C		0.011	W/°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Operating Junction Temperature Range	T_J	-55 to +150	°C

Thermal Characteristics

Parameter	Symbol	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	---	40	°C/W

Typical Electrical and Thermal Characteristic Curves

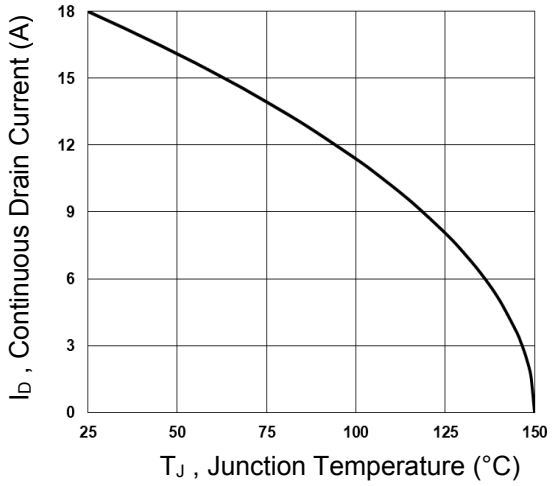


Fig.1 Continuous Drain Current vs. T_J

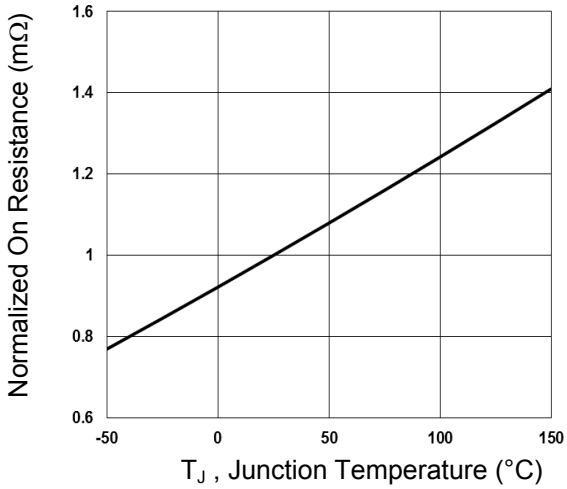


Fig.2 Normalized $R_{DS(ON)}$ vs. T_J

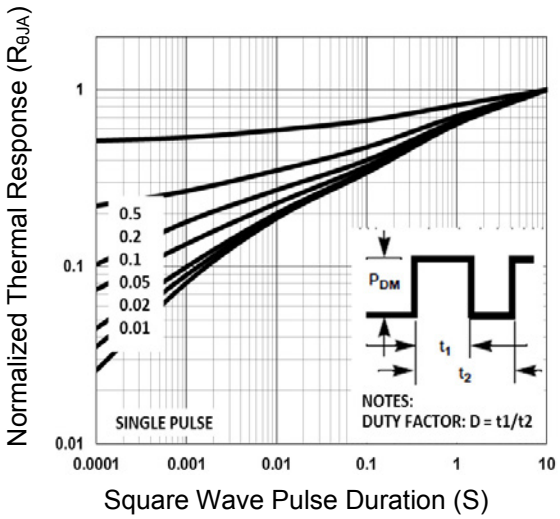


Fig.3 Normalized Transient Impedance

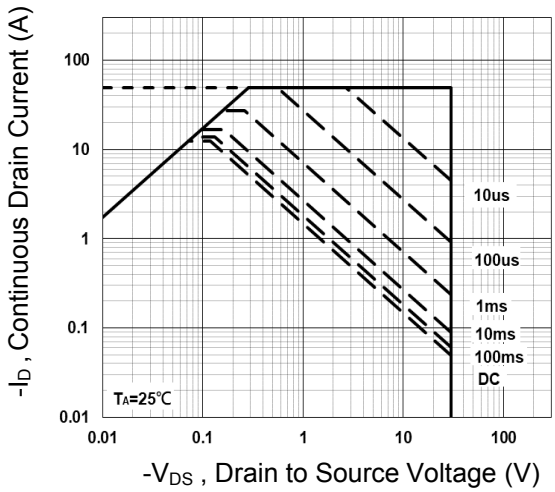


Fig.4 Maximum Safe Operation Area

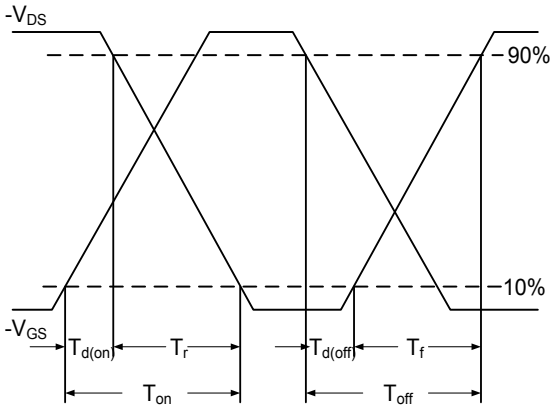


Fig.5 Switching Time Waveform

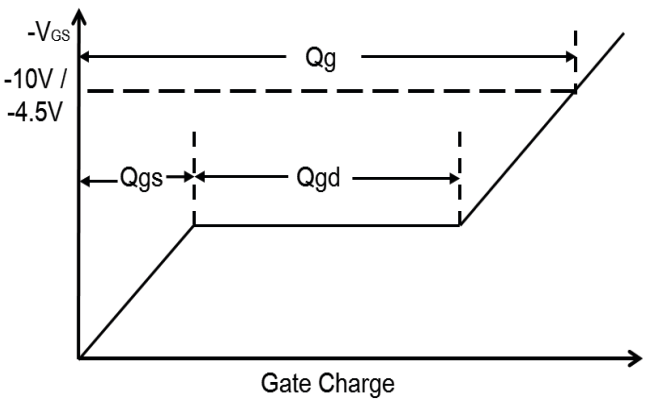
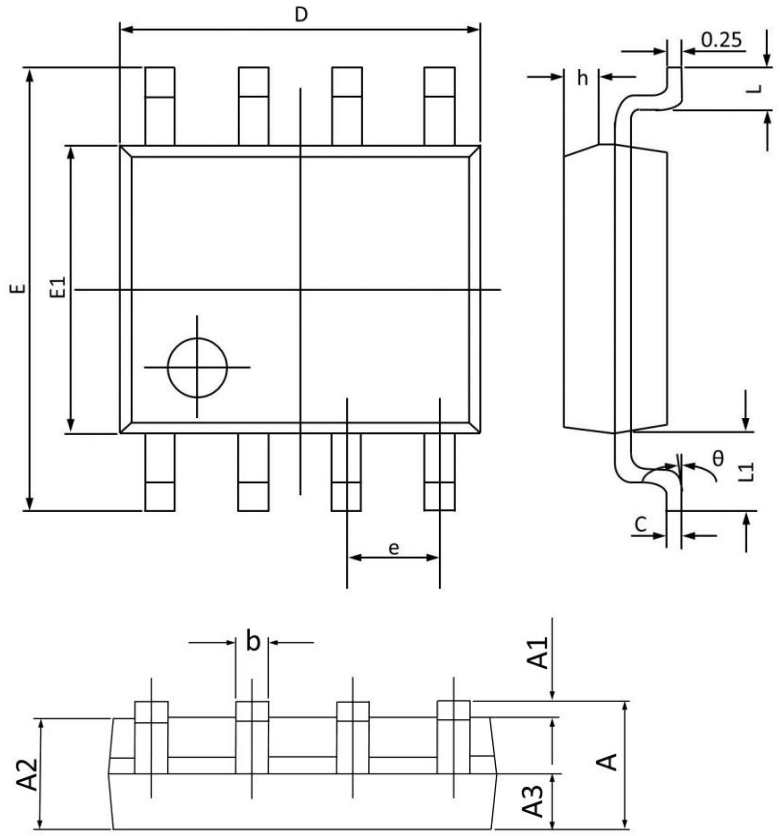


Fig.6 Gate Charge Waveform

Package Outline Dimensions SOP-8



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.068
A1	0.100	0.250	0.004	0.009
A2	1.300	1.500	0.052	0.059
A3	0.600	0.700	0.024	0.027
b	0.390	0.480	0.016	0.018
c	0.210	0.260	0.009	0.010
D	4.700	5.100	0.186	0.200
E	5.800	6.200	0.229	0.244
E1	3.700	4.100	0.146	0.161
e	1.270(BSC)		0.050(BSC)	
h	0.250	0.500	0.010	0.019
L	0.500	0.800	0.019	0.031
L1	1.050(BSC)		0.041(BSC)	
θ	0°	8°	0°	8°