

### Features

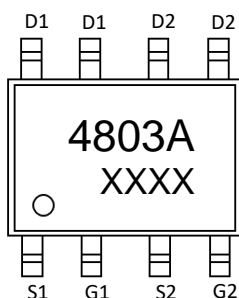
- Trench Power LV MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low  $R_{DS(ON)}$

### Product Summary

$V_{DS}$	$R_{DS(ON)}$ TYP	$I_D$
-30V	32m $\Omega$ @-10V	-5A
	51m $\Omega$ @-4.5V	

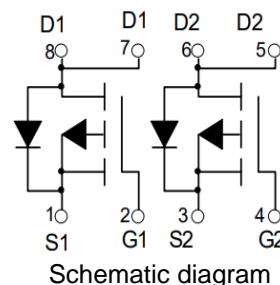
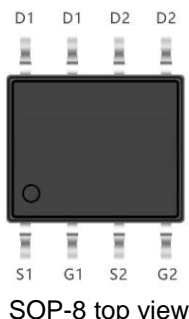
### Application

- DC-DC Converters
- Power management functions



4803A : Device code  
XXXX : Code

Marking and pin assignment



Absolute Maximum Ratings (TA=25°C unless otherwise noted)				
Symbol	Parameter		Rating	Unit
<b>Common Ratings (TC=25°C Unless Otherwise Noted)</b>				
$V_{DS}$	Drain-Source Breakdown Voltage		-30	V
$V_{GS}$	Gate-Source Voltage		$\pm 20$	V
$T_J$	Maximum Junction Temperature		150	°C
$T_{STG}$	Storage Temperature Range		-50 to 155	°C
$I_S$	Diode Continuous Forward Current	$T_C=25^\circ\text{C}$	-5	A
<b>Mounted on Large Heat Sink</b>				
$I_{DM}$	Pulse Drain Current Tested	$T_C=25^\circ\text{C}$	-30	A
$I_D$	Continuous Drain Current	$T_C=25^\circ\text{C}$	-5	A
$P_D$	Maximum Power Dissipation	$T_C=25^\circ\text{C}$	2.5	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient		62.5	°C/W

<b>Electrical Characteristics (T<sub>J</sub>=25 °C unless otherwise noted)</b>						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
<b>Static Electrical Characteristics @ T<sub>J</sub> = 25 °C (unless otherwise stated)</b>						
BV <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V, I <sub>D</sub> =-250μA	-30	--	--	V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =-30V, V <sub>GS</sub> =0V	--	--	-1	μA
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V	--	--	±100	nA
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =-250μA	-1.4	-1.6	-2.4	V
R <sub>DS(on)</sub>	Drain-Source On-State Resistance	V <sub>GS</sub> =-10V, I <sub>D</sub> =-5A	--	32	52	mΩ
		V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-4A	--	51	87	mΩ
<b>Dynamic Electrical Characteristics @ T<sub>J</sub> = 25 °C (unless otherwise stated)</b>						
C <sub>ISS</sub>	Input Capacitance	V <sub>DS</sub> =-15V, V <sub>GS</sub> =0V, f=1MHz	--	520	--	pF
C <sub>OSS</sub>	Output Capacitance		--	100	--	pF
C <sub>RSS</sub>	Reverse Transfer Capacitance		--	65	--	pF
<b>Switching Characteristics</b>						
Q <sub>g</sub>	Total Gate Charge	V <sub>DS</sub> =-15V, I <sub>D</sub> =-5A, V <sub>GS</sub> =-10V	--	9.2	--	nC
Q <sub>gs</sub>	Gate Source Charge		--	1.6	--	nC
Q <sub>gd</sub>	Gate Drain Charge		--	2.2	--	nC
t <sub>d(on)</sub>	Turn-on Delay Time	V <sub>DS</sub> =-15V, I <sub>D</sub> =-5A, V <sub>GS</sub> =-10V, R <sub>G</sub> =3Ω	--	7.5	--	nS
t <sub>r</sub>	Turn-on Rise Time		--	5.5	--	nS
t <sub>d(off)</sub>	Turn-Off Delay Time		--	19	--	nS
t <sub>f</sub>	Turn-Off Fall Time		--	7	--	nS
<b>Source- Drain Diode Characteristics</b>						
V <sub>SD</sub>	Forward on voltage	T <sub>J</sub> =25 °C, I <sub>S</sub> =-5A	--	--	-1.2	V

**Typical Operating Characteristics**

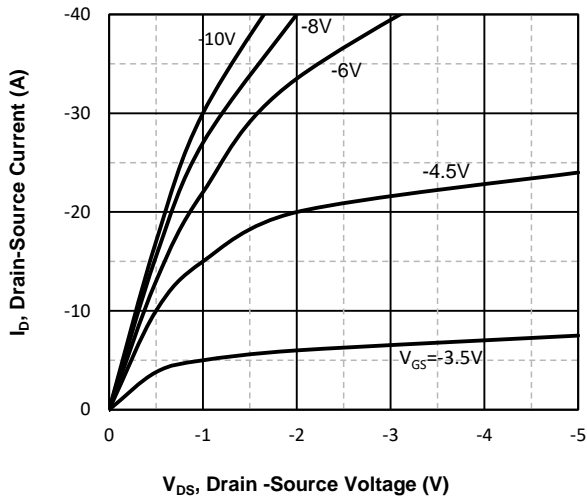


Fig1. Typical Output Characteristics

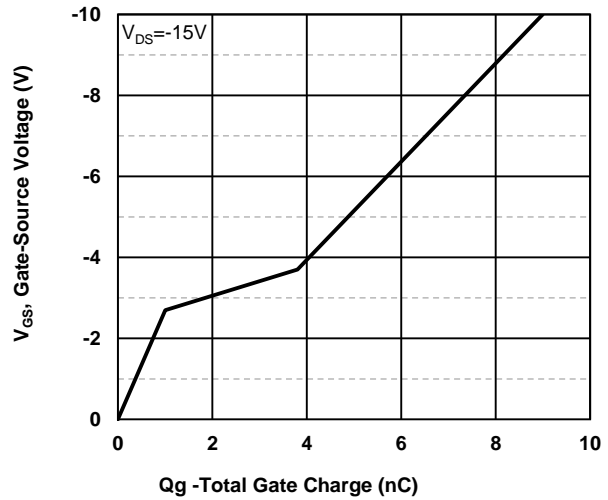


Fig2. Typical Gate Charge Vs. Gate-Source Voltage

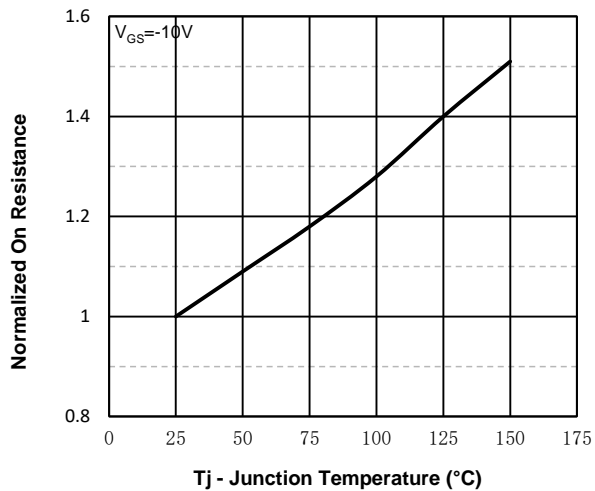


Fig3. Normalized On-Resistance Vs. Temperature

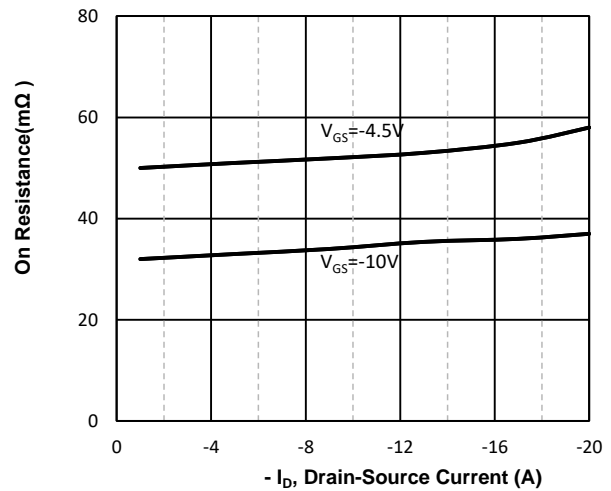


Fig4. On-Resistance Vs. Drain-Source Current

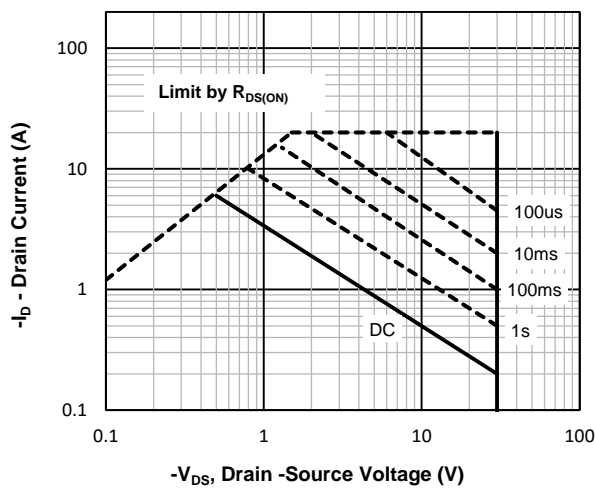


Fig5. Maximum Safe Operating Area

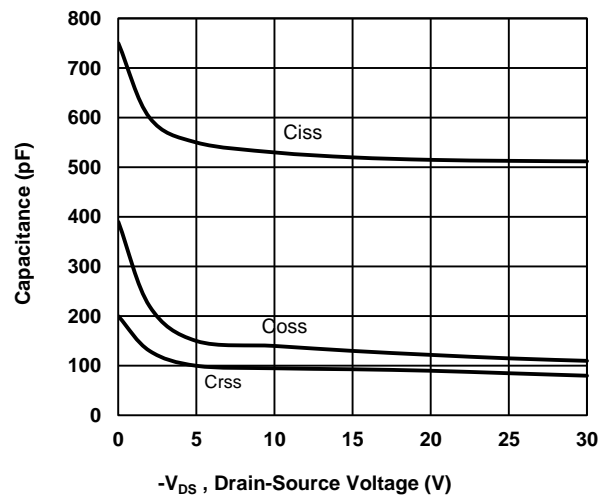
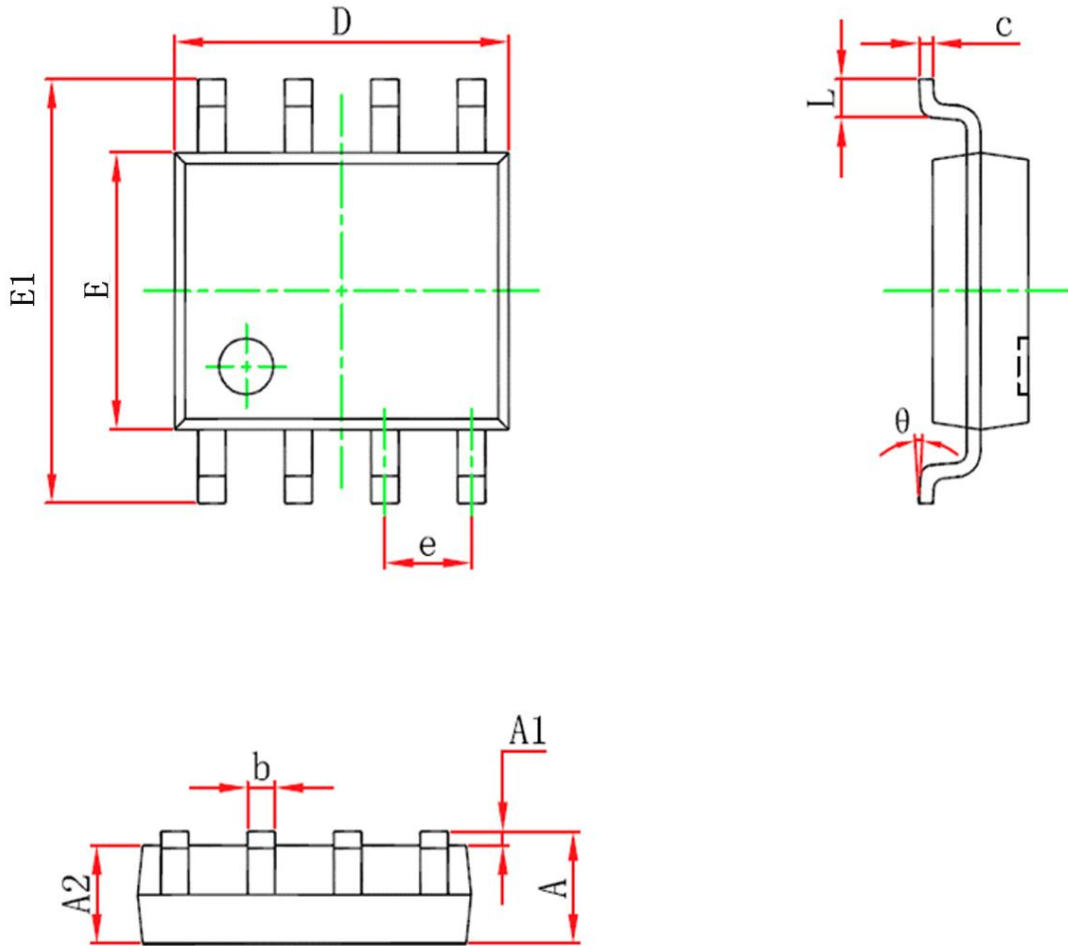


Fig6. Typical Capacitance Vs. Drain-Source Voltage

**SOP-8 Package information**



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.450	1.750	0.057	0.068
A1	0.100	0.250	0.003	0.009
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.012	0.020
c	0.170	0.250	0.006	0.009
D	4.700	5.100	0.185	0.200
e	1.270(BSC)		0.050(BSC)	
E	3.800	4.000	0.149	0.157
E1	5.800	6.200	0.228	0.244
L	0.400	1.270	0.015	0.050
θ	0°	8°	0°	8°