

Features

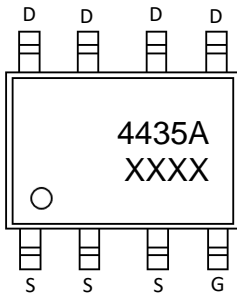
- Trench Power LV MOSFET technology
- High density cell design for Low $R_{DS(ON)}$
- High Speed switching

-30V/-10.5A P-Channel MOSFET Product Summary

V_{DS}	$R_{DS(ON)}$ MAX	I_D MAX
-30V	18m Ω @-10V	-10.5A
	30m Ω @-4.5V	

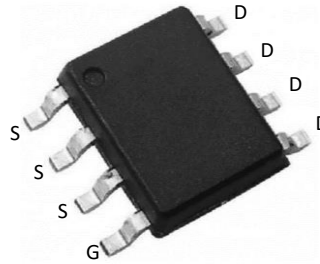
Application

- Battery protection
- Power management
- Load switch

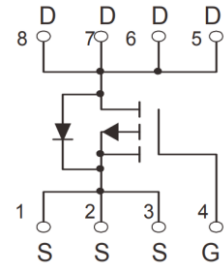


Marking and pin assignment

4435A : Device code
XXXX : Code



SOP-8 top view



Schematic diagram



Absolute Maximum Ratings (TA=25°C unless otherwise noted)				
Symbol	Parameter		Rating	Unit
Common Ratings (TC=25°C Unless Otherwise Noted)				
V_{DS}	Drain-Source Breakdown Voltage		-30	V
V_{GS}	Gate-Source Voltage		± 20	V
T_J	Maximum Junction Temperature		150	$^{\circ}C$
T_{STG}	Storage Temperature Range		-50 to 155	$^{\circ}C$
I_S	Diode Continuous Forward Current	$T_C=25^{\circ}C$	-10.5	A
Mounted on Large Heat Sink				
I_{DM}	Pulse Drain Current Tested	$T_C=25^{\circ}C$	-50	A
I_D	Continuous Drain Current	$T_C=25^{\circ}C$	-10.5	A
P_D	Maximum Power Dissipation	$T_C=25^{\circ}C$	3	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient		42	$^{\circ}C/W$

Electrical Characteristics (T _J =25°C unless otherwise noted)						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
BV _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250μA	-30	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-30V, V _{GS} =0V	--	--	-1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±20V, V _{DS} =0V	--	--	±100	nA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250μA	-1	-1.5	-3	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =-10V, I _D =-10A	--	15	18	mΩ
		V _{GS} =-4.5V, I _D =-8A	--	22	30	mΩ
Dynamic Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
C _{ISS}	Input Capacitance	V _{DS} =-15V, V _{GS} =0V, f=1MHz	--	1500	--	pF
C _{OSS}	Output Capacitance		--	180	--	pF
C _{RSS}	Reverse Transfer Capacitance		--	150	--	pF
Switching Characteristics						
Q _g	Total Gate Charge	V _{DS} =-10V, I _D =-6A, V _{GS} =-15V	--	29	--	nC
Q _{gs}	Gate Source Charge		--	5.4	--	nC
Q _{gd}	Gate Drain Charge		--	5.4	--	nC
t _{d(on)}	Turn-on Delay Time	V _{DD} =-15V, I _D =-6A, V _{GS} =-10V, R _G =2.5Ω	--	10	--	nS
t _r	Turn-on Rise Time		--	45	--	nS
t _{d(off)}	Turn-Off Delay Time		--	55	--	nS
t _f	Turn-Off Fall Time		--	60	--	nS
Source- Drain Diode Characteristics						
V _{SD}	Forward on voltage	T _J =25°C, I _S =-10A,	--	-0.8	-1.2	V

Typical Operating Characteristics

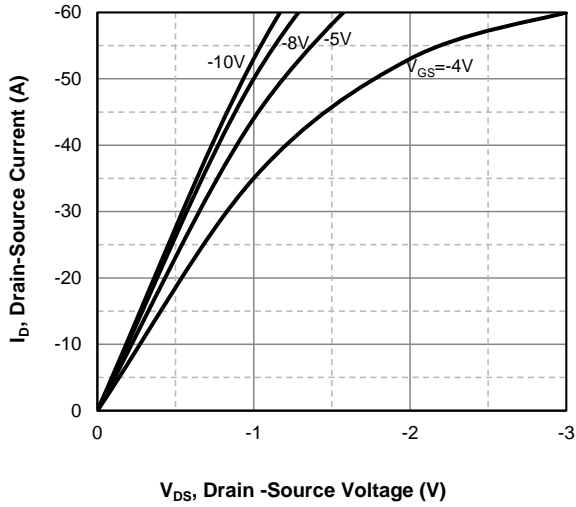


Fig1. Typical Output Characteristics

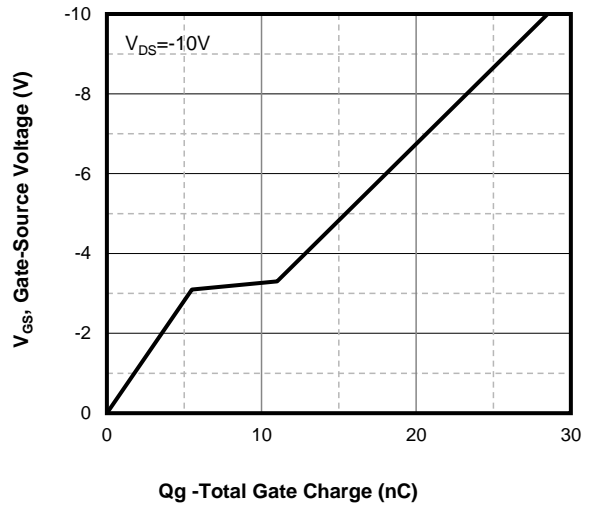


Fig2. Typical Gate Charge Vs. Gate-Source Voltage

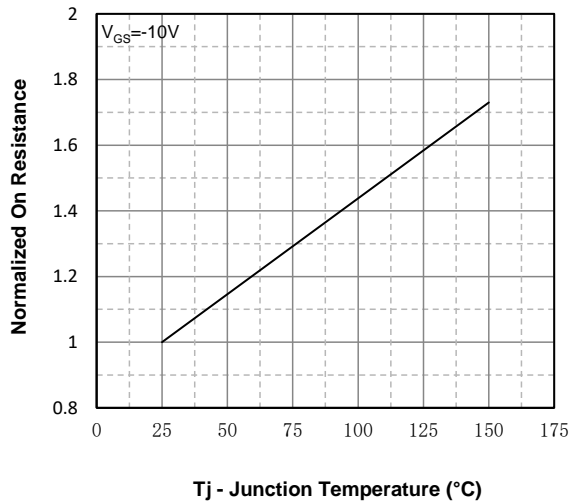


Fig3. Normalized On-Resistance Vs. Temperature

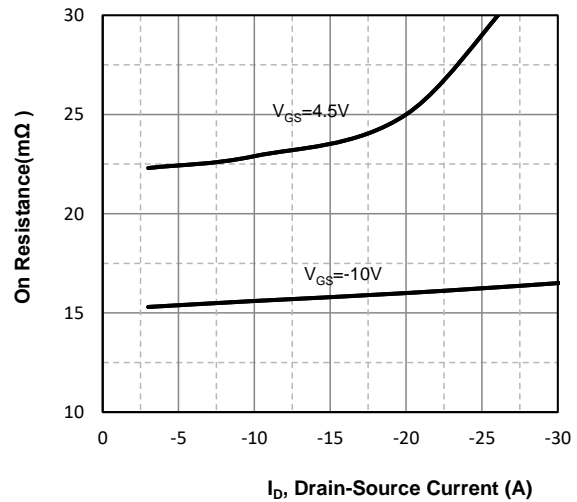


Fig4. On-Resistance Vs. Drain-Source Current

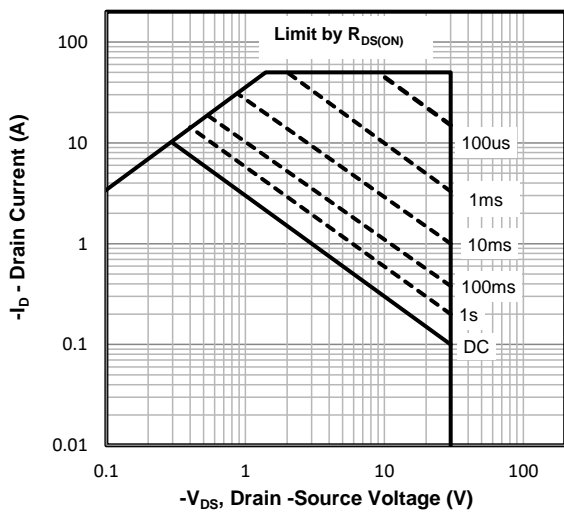


Fig5. Maximum Safe Operating Area

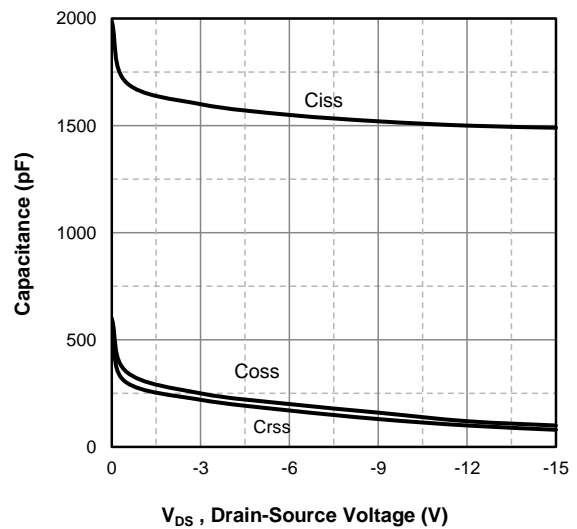
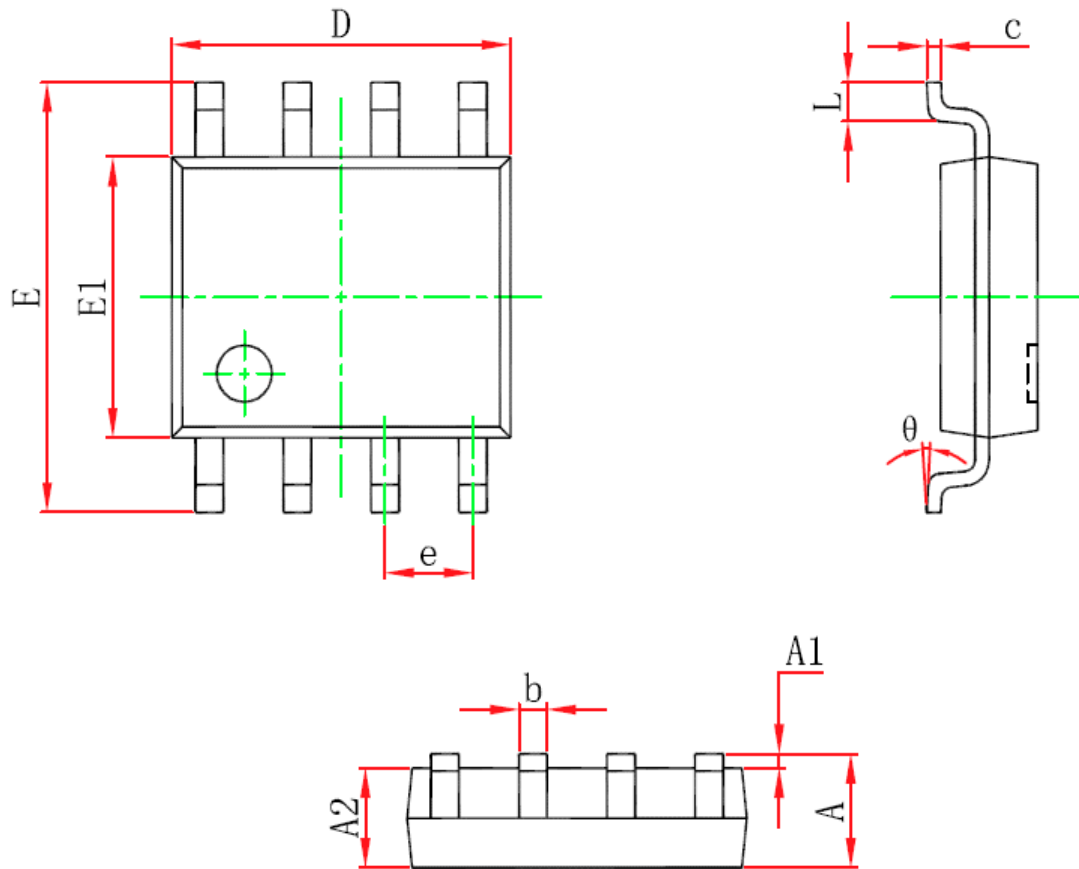


Fig6 Typical Capacitance Vs. Drain-Source Voltage

SOP-8 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.450	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.700	5.100	0.185	0.201
e	1.270(BSC)		0.050(BSC)	
E	5.800	6.200	0.028	0.035
E1	3.800	4.000	0.057	0.069
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [MOSFET](#) category:

Click to view products by [Yongyutai Electronics](#) manufacturer:

Other Similar products are found below :

[IRFD120](#) [IRFY240C](#) [JANTX2N5237](#) [2SK2267\(Q\)](#) [BUK455-60A/B](#) [MIC4420CM-TR](#) [VN1206L](#) [NDP4060](#) [SI4482DY](#)
[IPS70R2K0CEAKMA1](#) [SQD23N06-31L-GE3](#) [TK16J60W,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#) [EFC2J004NUZTDG](#)
[DMN1053UCP4-7](#) [SQJ469EP-T1-GE3](#) [NTE2384](#) [DMC2700UDMQ-7](#) [DMN2080UCB4-7](#) [DMN61D9UWQ-13](#) [US6M2GTR](#)
[DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#) [STF5N65M6](#) [IRF40H233XTMA1](#) [STU5N65M6](#)
[DMN6022SSD-13](#) [DMN13M9UCA6-7](#) [DMTH10H4M6SPS-13](#) [DMN2990UFB-7B](#) [IPB80P04P405ATMA2](#) [2N7002W-G](#) [MCAC30N06Y-](#)
[TP](#) [MCQ7328-TP](#) [NTMC083NP10M5L](#) [NVMFS2D3P04M8LT1G](#) [BXP7N65D](#) [BXP4N65F](#) [AOL1454G](#) [WMJ80N60C4](#) [BXP2N20L](#)
[BXP2N65D](#) [BXT1150N10J](#) [BXT1700P06M](#) [TSM60NB380CP](#) [ROG](#) [RQ7L055BGTCR](#) [DMNH15H110SK3-13](#)