

## Features

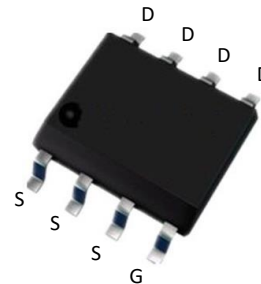
- Trench Power MV MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low  $R_{DS(ON)}$

## Product Summary

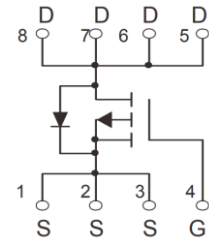
$V_{DS}$	$R_{DS(ON)}$ MAX	$I_D$ MAX
-30V	60mΩ@10V	-5A
	90mΩ@4.5V	

## Application

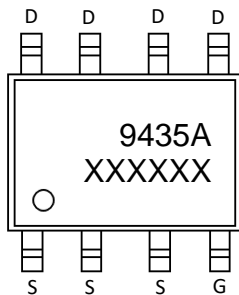
- DC-DC Converters
- Power management functions



SOP-8 top view



Schematic diagram



9435A : Device code  
XXXXXX : Code

Marking and pin assignment

### Absolute Maximum Ratings (TA=25°C unless otherwise noted)

Symbol	Parameter	Rating	Unit
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### Common Ratings (TC=25°C Unless Otherwise Noted)

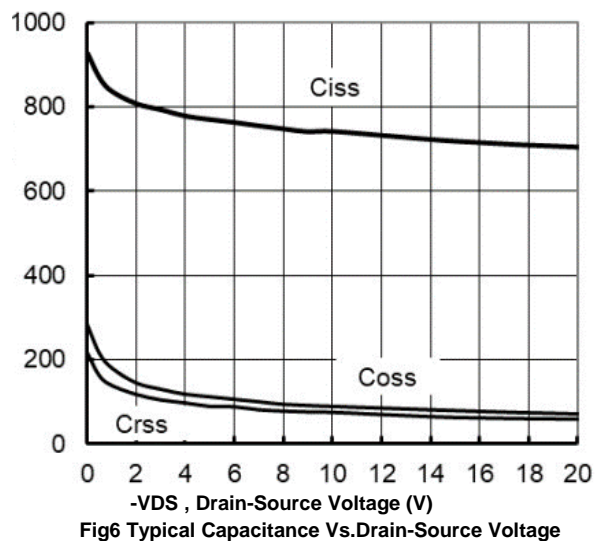
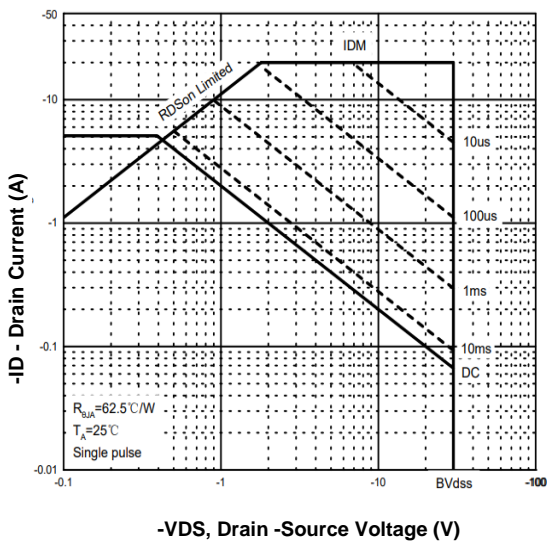
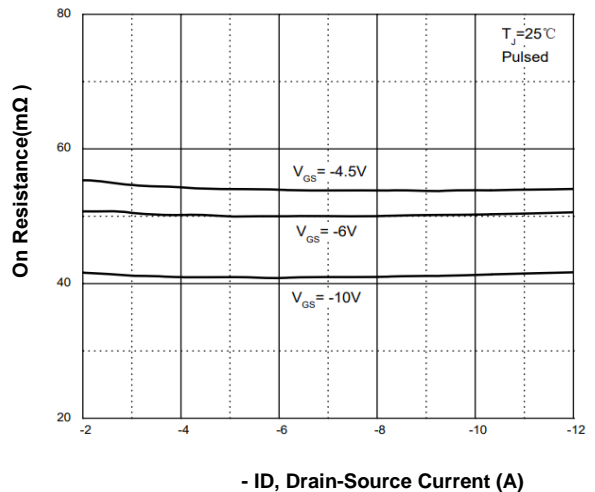
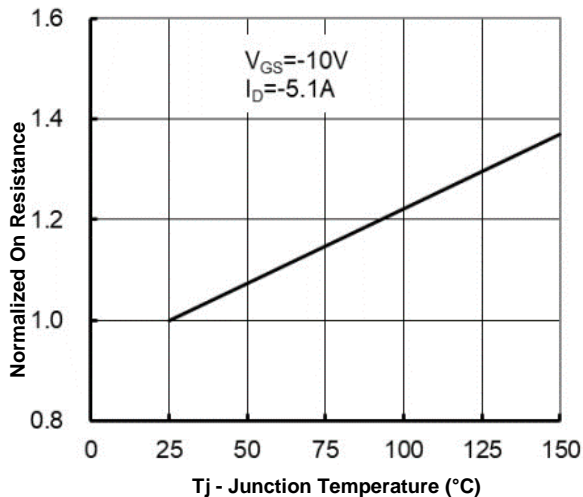
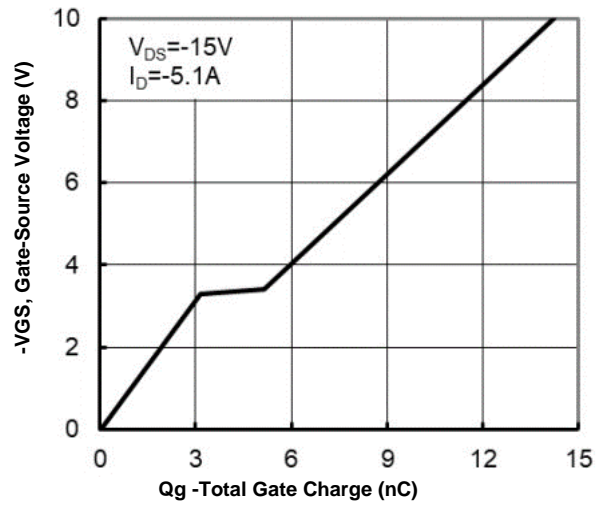
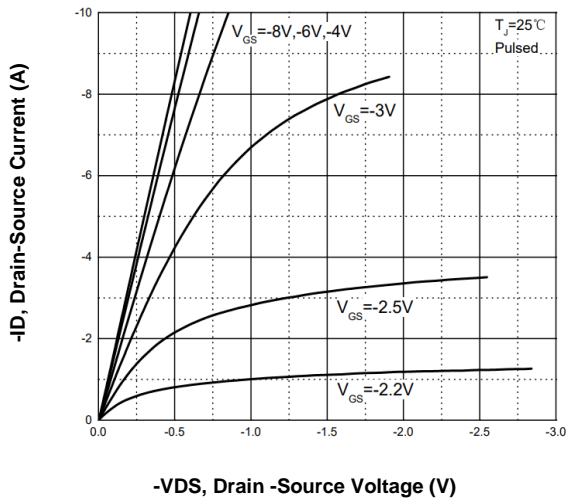
$V_{DS}$	Drain-Source Breakdown Voltage	-30	V
$V_{GS}$	Gate-Source Voltage	±20	V
$T_J$	Maximum Junction Temperature	150	°C
$T_{STG}$	Storage Temperature Range	-50 to 155	°C
$I_S$	Diode Continuous Forward Current	Tc=25°C -5	A

### Mounted on Large Heat Sink

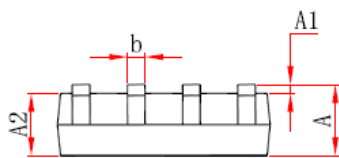
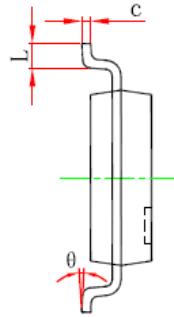
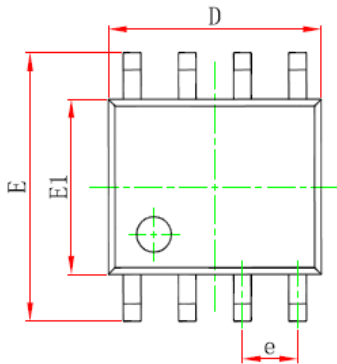
$I_{DM}$	Pulse Drain Current Tested	Tc=25°C -20	A
$I_D$	Continuous Drain Current@GS=10V	Tc=25°C -5	A
$P_D$	Maximum Power Dissipation	Tc=25°C 2.5	W
$R_{θJA}$	Thermal Resistance Junction-Ambient>(*1 in2 Pad of 2-oz Copper), Max.)	50	°C/W

<b>Electrical Characteristics (T<sub>J</sub>=25°C unless otherwise noted)</b>						
<b>Symbol</b>	<b>Parameter</b>	<b>Condition</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>
<b>Static Electrical Characteristics @ T<sub>J</sub> = 25°C (unless otherwise stated)</b>						
BV <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	VGS=0V, ID=-250μA	-30	--	--	V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	VDS=-30V, VGS=0V	--	--	-1	μA
I <sub>GSS</sub>	Gate-Body Leakage Current	VGS=±20V, VDS=0V	--	--	±100	nA
V <sub>GS(th)</sub>	Gate Threshold Voltage	VDS=VGS, ID=-250μA	-1	-1.5	-2.5	V
R <sub>DS(on)</sub>	Drain-Source On-State Resistance	VGS=-10V, ID=-4.6A	--	45	60	mΩ
		VGS=-4.5V, ID=-4.1A	--	60	90	
<b>Dynamic Electrical Characteristics @ T<sub>J</sub> = 25°C (unless otherwise stated)</b>						
C <sub>ISS</sub>	Input Capacitance	VDS=-15V, VGS=0V, f=1MHz	--	770	--	pF
C <sub>OSS</sub>	Output Capacitance		--	440	--	pF
C <sub>RSS</sub>	Reverse Transfer Capacitance		--	123	--	pF
<b>Switching Characteristics</b>						
Q <sub>g</sub>	Total Gate Charge	VDS=-15V, ID=-4.2A, VGS=-10V	--	30	--	nC
Q <sub>gs</sub>	Gate Source Charge		--	2.7	--	nC
Q <sub>gd</sub>	Gate Drain Charge		--	6.9	--	nC
t <sub>d(on)</sub>	Turn-on Delay Time	VDS=-15V, ID=-1A, VGS=-10V, RG=3Ω	--	9	--	nS
t <sub>r</sub>	Turn-on Rise Time		--	16	--	nS
t <sub>d(off)</sub>	Turn-Off Delay Time		--	77	--	nS
t <sub>f</sub>	Turn-Off Fall Time		--	40	--	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



## SOP-8 Package information



Symbol	Dimensions In Millimeters		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	0.228	0.244
E1	3.800	4.000	0.150	0.157
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

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