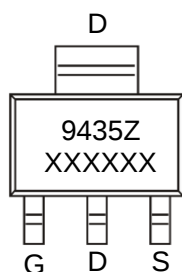


Features

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

Application

- DC-DC Converters
- Power management functions

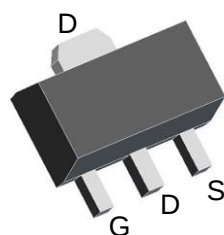


9435Z : Device code
XXXXXX : Code

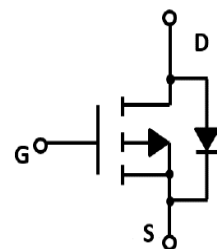
Marking and pin assignment

-30V/-4.5A P-Channel MOSFET Product Summary

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



SOT-89 top view



Schematic diagram

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)

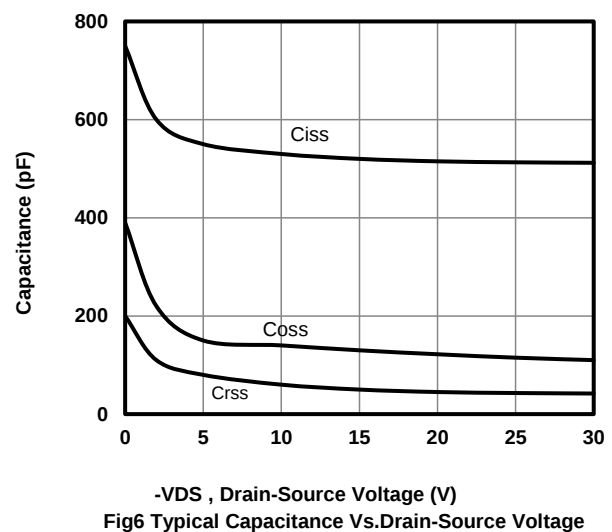
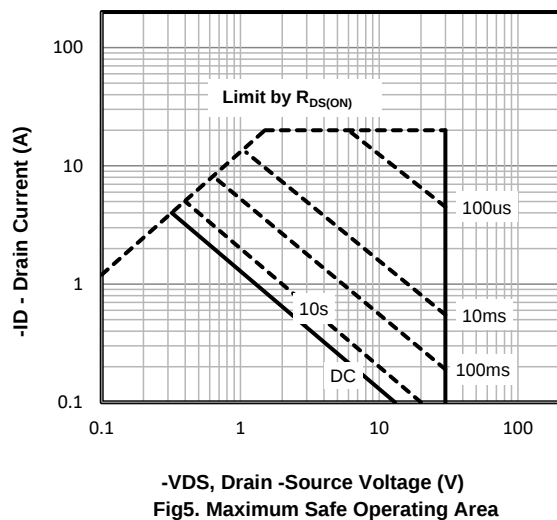
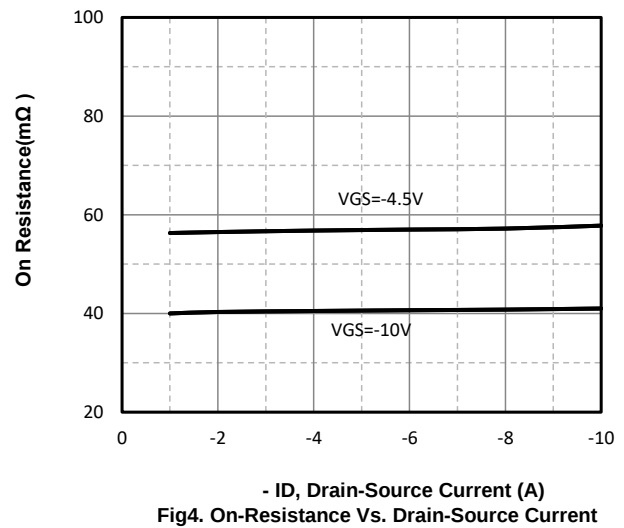
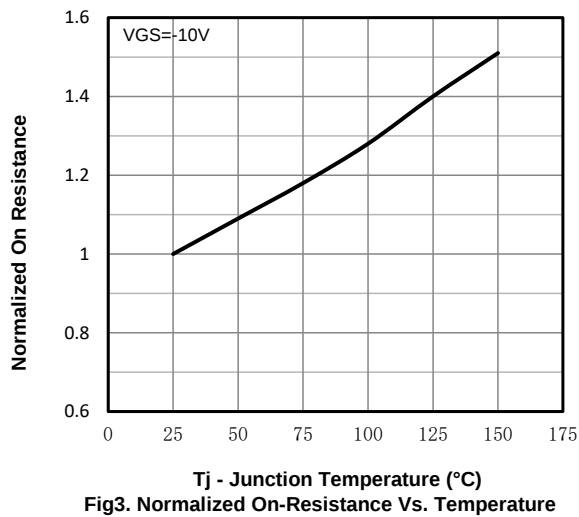
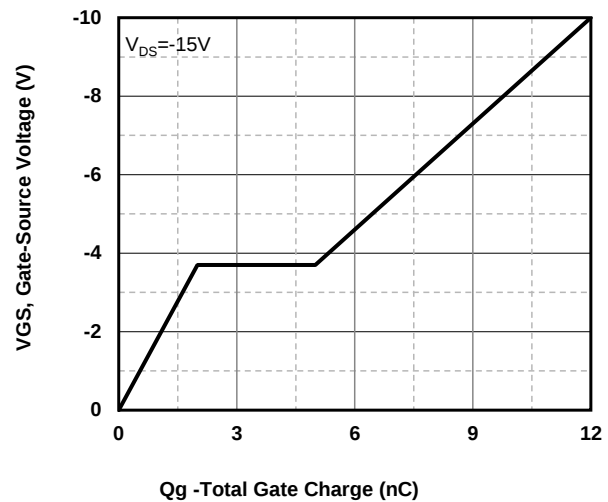
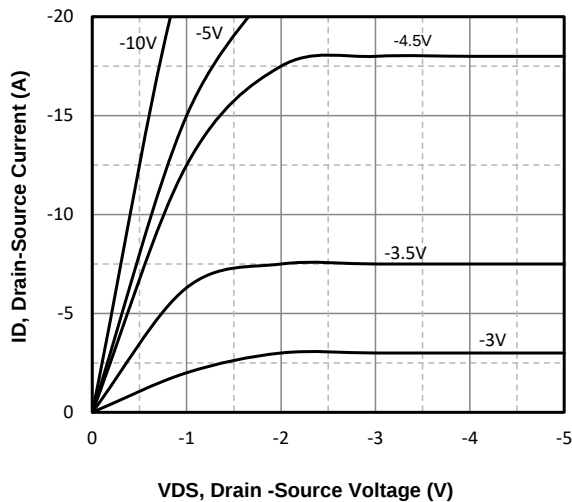
V _{DS}	Drain-Source Breakdown Voltage		-30	V
V _{GS}	Gate-Source Voltage		±20	V
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-50 to 155	°C
I _S	Diode Continuous Forward Current	Tc=25°C	-4.5	A

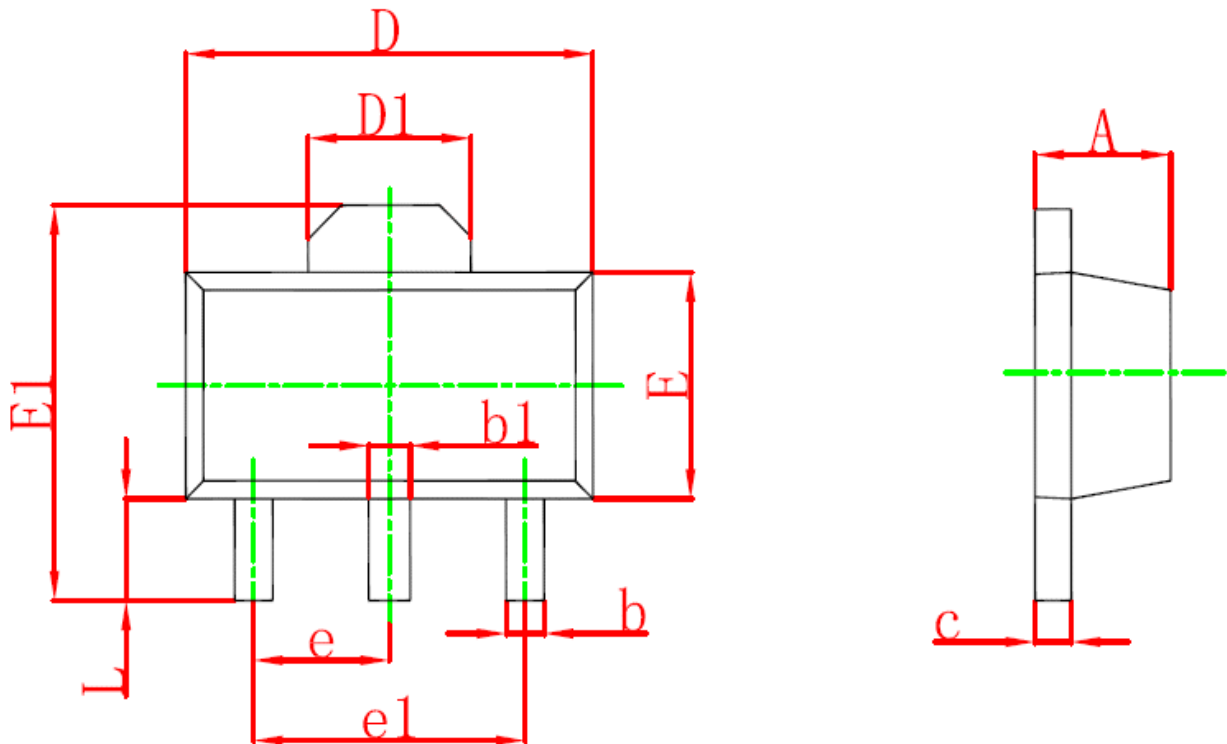
Mounted on Large Heat Sink

I_{DM}	Pulse Drain Current Tested	Tc=25°C	-20	A
I_D	Continuous Drain Current@GS=10V	Tc=25°C	-4.5	A
P_D	Maximum Power Dissipation	Tc=25°C	1.9	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient((1 in2 Pad of 2-oz Copper), Max.)		65	°C/W

Electrical Characteristics (TJ=25°C unless otherwise noted)						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
BV _{(BR)DSS}	Drain-Source Breakdown Voltage	VGS=0V, ID=-250μA	-30	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	VDS=-30V, VGS=0V	--	--	-1	uA
I _{GSS}	Gate-Body Leakage Current	VGS=±20V, VDS=0V	--	--	±100	nA
V _{GS(th)}	Gate Threshold Voltage	VDS=VGS, ID=-250μA	-1	-1.5	-2.5	V
R _{DS(on)}	Drain-Source On-State Resistance	VGS=-10V, ID=-4.9A	--	40	60	mΩ
		VGS=-4.5V, ID=-3.7A	--	56	90	mΩ
Dynamic Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
C _{ISS}	Input Capacitance	VDS=-15V, VGS=0V, f=1MHz	--	520	--	pF
C _{OSS}	Output Capacitance		--	130	--	pF
C _{RSS}	Reverse Transfer Capacitance		--	70	--	pF
Switching Characteristics						
Q _g	Total Gate Charge	VDS=-15V, ID=-5A, VGS=-10V	--	12	--	nC
Q _{gs}	Gate Source Charge		--	2	--	nC
Q _{gd}	Gate Drain Charge		--	2.9	--	nC
t _{d(on)}	Turn-on Delay Time	VDS=-15V, ID=-1A, VGS=-10V, RG=3Ω	--	7	--	nS
t _r	Turn-on Rise Time		--	13	--	nS
t _{d(off)}	Turn-Off Delay Time		--	14	--	nS
t _f	Turn-Off Fall Time		--	9	--	nS
Source- Drain Diode Characteristics						
V _{SD}	Forward on voltage	Tj=25°C, Is=-5A,	--	--	-1.2	V

Typical Operating Characteristics



SOT-89 Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions in Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF		0.061 REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060 TYP	
e1	3.000 TYP		0.118 TYP	
L	0.900	1.200	0.035	0.047