



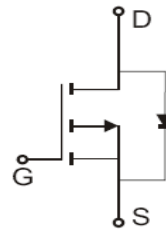
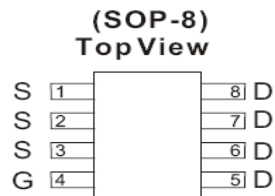
General Description

The Z9435 is the P-Channel logic enhancement mode power field effect transistors, using high cell density, DMOS trench technology. This high density process is especially tailored to minimize on-state resistance. These devices are particularly suited for low voltage application such as cellular phone, notebook computer power management and other battery powered circuits, and low in-line power loss that are needed in a very small outline surface mount package.

Product Summary

V_{DS}	-30V
I_D (at $V_{GS}=20V$)	-5.3A
$R_{DS(ON)}$ (at $V_{GS}=-10V$)	< 55mΩ
$R_{DS(ON)}$ (at $V_{GS}=-4.5V$)	< 90mΩ

● **Pin Configuration**



Absolute Maximum Ratings $T_A=25^{\circ}C$ unless otherwise noted

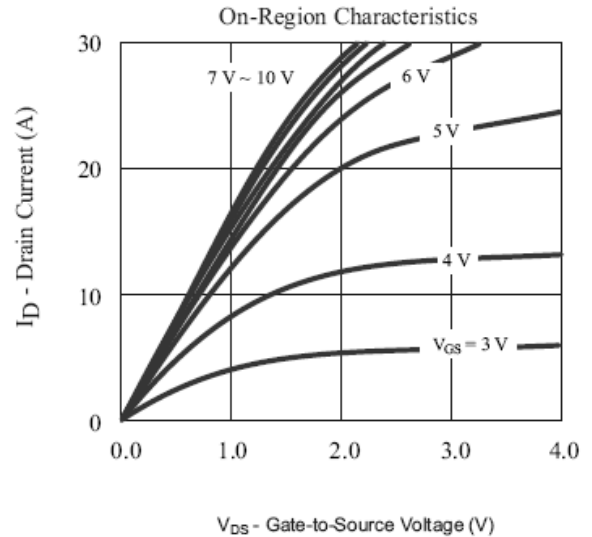
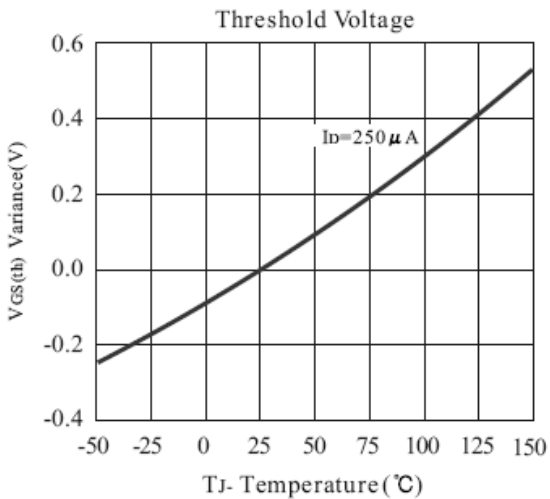
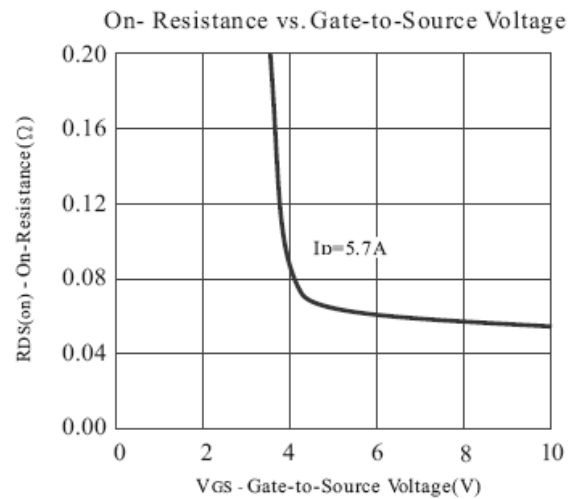
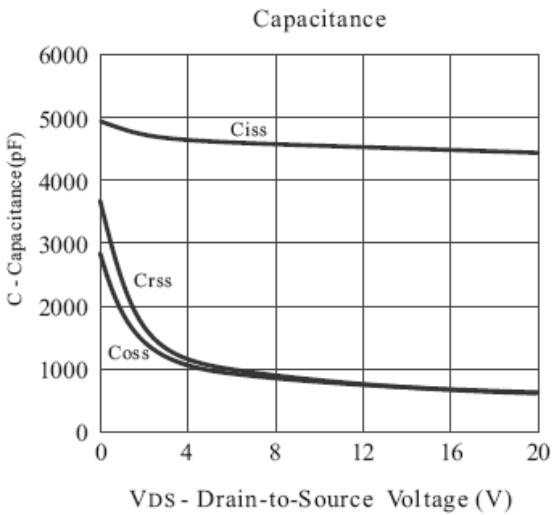
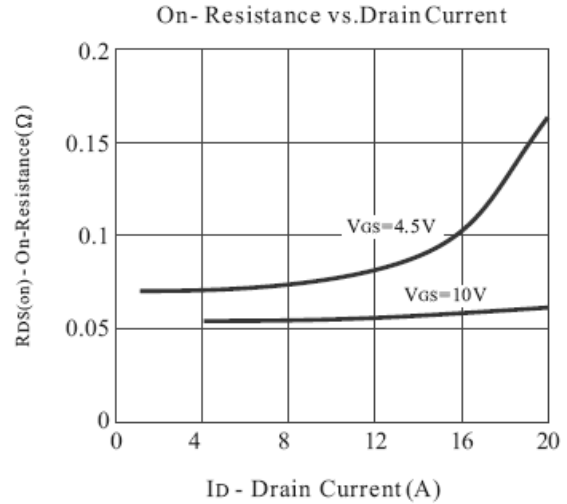
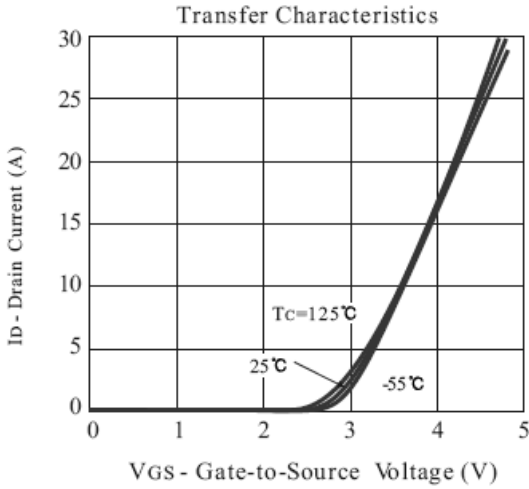
Parameter	Symbol	Limits	Units
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current	I_D	-5.3	A
Pulsed Drain Current ¹⁾	I_{DM}	-20	
Maximum Power Dissipation	$T_A=25$	2.5	W
	$T_A=70$		
Operating Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Junction-to-Case Thermal Resistance	R_{JC}	30	/W
Junction-to-Ambient Thermal Resistance (PCB mounted) ²⁾	R_{JA}	50	/W



● **Electrical Characteristics** @ $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min	Typ	Max	Units
STATIC						
B_{VDSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\text{ A}$	-30			V
$R_{DS(ON)}$	Drain-Source On-Resistance	$V_{GS} = -10V, I_D = -5.3A$		55	60	m Ω
		$V_{GS} = -4.5V, I_D = -4.2A$		90	100	
$V_{GS(th)}$	Gate-Threshold Voltage	$V_{GS} = V_{GS}, I_D = -250\text{ A}$	-1.0	-2.2	-3.0	V
I_{GSS}	Gate-Body Leakage	$V_{GS} = +20V, V_{DS} = 0V$			+100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = -24V, V_{GS} = 0V$			-1	A
g_{FS}	Forward Transconductance	$V_{DS} = -15V, I_D = -5.3A$	4	7		S
DYNAMIC						
Q_g	Total Gate Charge	$V_{DS} = -15V, I_D = -5.3A, V_{GS} = -10V$		9.52		nC
Q_{gs}	Gate-Source Charge			3.43		
Q_{gd}	Gate-Drain Charge			1.71		
$t_{D(on)}$	Turn-On Delay Time	$V_{DD} = -15V, R_L = 15\ \Omega, I_D = -1A,$ $V_{GEN} = -10V, R_G = 6\ \Omega$		34.5		ns
t_r	Turn-On Rise Time			18.6		
$t_{D(off)}$	Turn-Off Delay Time			37.1		
t_f	Turn-Off Fall Time			3.1		

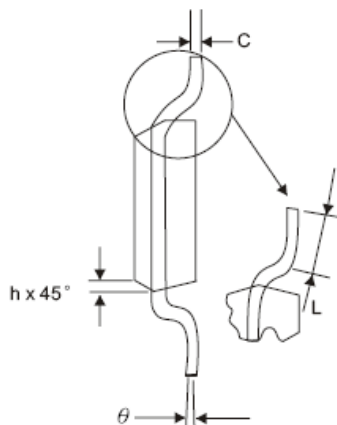
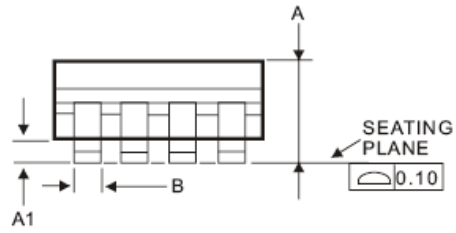
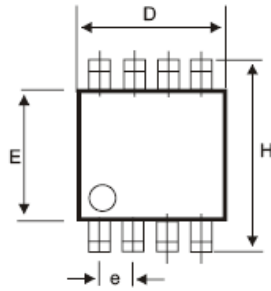
● **Typical Performance Characteristics**



● **Package Information**

Physical Dimensions inches(millimeters) unless otherwise noted

SOP-8



DIM	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
B	0.35	0.49
C	0.18	0.25
D	4.80	5.00
E	3.80	4.00
e	1.27 BSC	
H	5.80	6.20
h	0.25	0.50
L	0.40	1.25
θ	0°	7°

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