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September 1999

FDS9431A

FDS9431A P-Channel 2.5V Specified MOSFET

General Description

This P-Channel 2.5V specified MOSFET is produced using Fairchild's proprietary, high cell density, DMOS technology. This very high density process has been especially tailored to minimize on-state resistance and yet maintain superior switching performance.

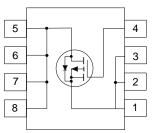
Applications

- DC/DC converter
- Power management
- Load switch
- Battery protection

Features

- -3.5 A, -20 V. $R_{DS(ON)} = 0.130 \ \Omega \ @ V_{GS} = -4.5 \ V$ $R_{DS(ON)} = 0.180 \ \Omega \ @ V_{GS} = -2.5 \ V.$
- Fast switching speed.
- High density cell design for extremely low R_{DS(ON)}.
- High power and current handling capability.





Absolute Maximum Ratings T_A=25°C unless otherwise noted

Symbol	Parameter		Ratings	Units	
V _{DSS}	Drain-Source Voltage		-20	V	
V _{GSS}	Gate-Source Voltage		±8	V	
ID	Drain Current - Continuous	(Note 1a)	-3.5	А	
	- Pulsed		-18		
PD	Power Dissipation for Single Operation	(Note 1a)	2.5	W	
		(Note 1b)	1.2		
		(Note 1c)	1.0		
TJ, T _{stg}	Operating and Storage Junction Temperature Range		-55 to +150	°C	

Thermal Characteristics

$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	(Note 1a)	50	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction-to-Case	(Note 1)	25	°C/W

Package Marking and Ordering Information

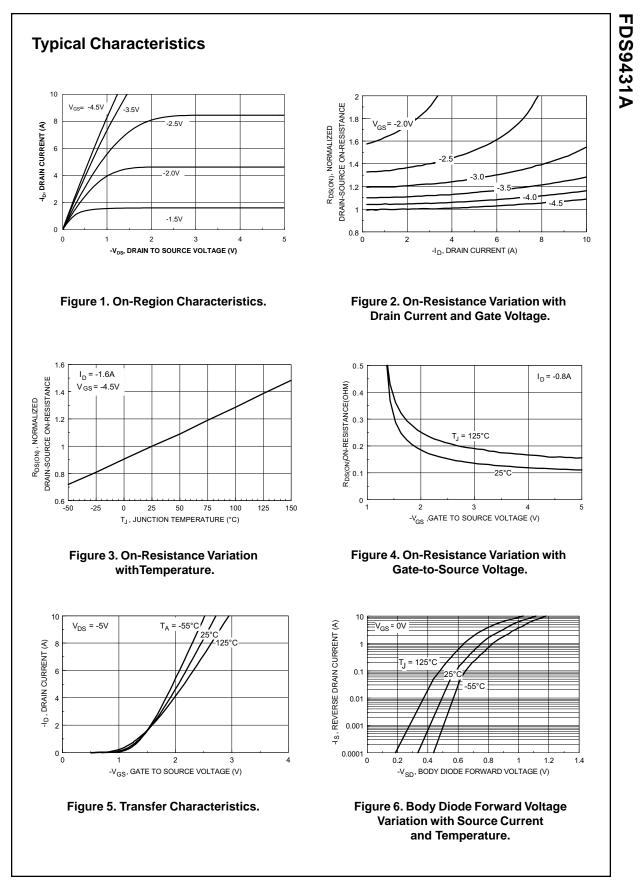
Device Marking	Device	Reel Size	Tape width	Quantity
FDS9431A	FDS9431A	13"	12mm	2500 units

-1 100 -100 -1 0.130	100 n
-100 -1	-1 µ 100 n -100 n -100 n
-100 -1	-1 μ 100 m -100 m
-100 -1	-100 n
-100	-100 n
-1	-1
0.130	m۱
0.130	
	0.130
0.180	
0.220	0.220
-	
	p p
-	r
-	, F
13	13 r
35	35 r
50	50 r
35	35 r
8.5	8.5 n
	n
	n
-2.1	-2.1
-	

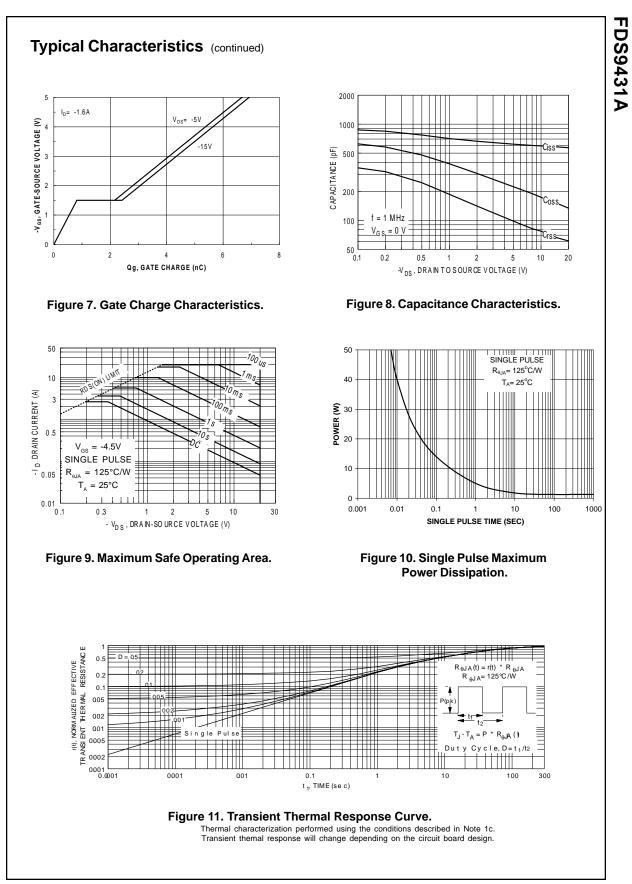
FDS9431A

Scale 1:1 on letter size paper

2: Pulse Test: Pulse Width \leq 300 µs, Duty Cycle \leq 2.0%



FDS9431A Rev. A2



FDS9431A Rev. A2

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